

BEFORE THE NATIONAL GREEN TRIBUNAL,**WESTERN BENCH, NEW DELHI****PUNE ZONAL BENCH****Original Application No. 7 of 2020.**

Aryavart Foundation Through its president ... Applicant

Versus

M/s. Naroda Enviro Project Limited (CETP) &ors. Respondents

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Filed by:

A.Kapadia

ANUSHREE KAPADIA

ADVOCATE FOR THE RESPONDENT No.1

B-5/50, 03rd Floor,

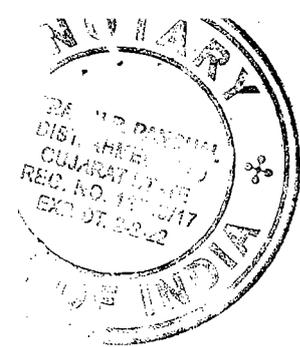
Safdarjung Enclave,

New Delhi – 29

Mobile No. 9958 00 9320

New Delhi

Date:



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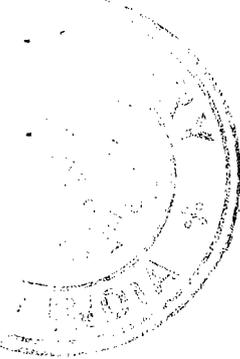
**AFFIDAVIT OF REPLY / OBJECTIONS ON BEHALF OF
RESPONDENT NO. 1 - M/S. NARODA ENVIRO PROJECT
LTD. TO THE REPORT OF COMMITTEE DATED AUGUST
2020**

MOST RESPECTFULLY SHEWETH THAT :

I, Shailesh Patwari, S/o Indradaman, Aged about 66 years, having my office at 512-515, Phase 1 GIDC, Naroda, Admedabad 382330, do hereby solemnly affirm and declare as under:-

1. That I am Chairman and Director of the respondent No.1 in the present case and am authorized to file the present Reply

Shailesh Patwari



on behalf of the respondent No.1. I am well conversant with the facts and circumstances of the case based on the record available with my office and I am competent to affirm this affidavit

2. Respondent No.1 has filed its reply dated 27.08.2020 in this Original Application. The respondent reiterates what is stated in the reply refraining from reproducing statements, averments and contentions raised therein for the sake of brevity. The respondent submits that said reply filed earlier be treated as part of this reply.

3. I say that this Hon'ble Tribunal vide its order dated 05.02.2020 read with order dated 29.06.2020 had constituted a committee to inspect CETP in question as well as the member industries and verify on the factual allegations in OA and submit a report. The Committee has submitted its report of August 2020. This further reply is being filed by respondent No. 1 in the context of the

Srinivas Patil

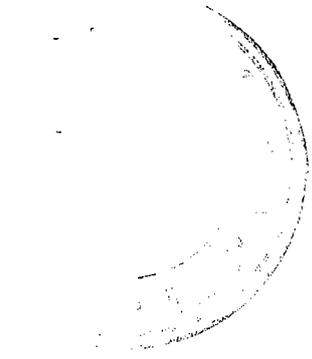


aforesaid report and as per the order of this Hon'ble Tribunal dated 11.09.2020 and 21.09.2020.

4. At the outset, it is submitted with respect that the report is based on certain incorrect premise, does not look at the issues in their entirety and overlooks statutory provisions. The respondent denies all adverse statements, remarks and observations made against respondent No. 1 except those which are specifically admitted to be true hereafter. Not dealing with any of the statements or remarks or observations may not be taken as admission of any such observations or directions.

5. The Committee, in Para - 2 of the report, has dealt with CETP at Naroda and various aspects related to that like Effluent Collection Arrangement from Member Industries of CETP, status of consents, treatment scheme at CETP, upgradation of CETP and Monitoring of CETP. In **Para - 2.1 of the**

Srin Prati



report, the Committee has dealt with effluent collection arrangement from member industries of CETP. It is true that 25 industries are discharging their waste water to CETP through tankers and 119 member industries are sending their waste water to CETP through underground pipe line. It would not be accurate to say that 119 members send their effluents through drainage line. While referring to effluent treatment, the committee has failed to notice that CETP at Naroda is based on segregation at source of three different types of effluents which are treated separately. It is an established principle that effective pollution control depends on segregation of different types of effluents and treating them separately by adopting the best possible method for the concerned type of effluent. If different types of effluents generated from different industries are treated in a common pool by common technic , the results may not be effective. The CETP, Naroda collects effluent mainly from three types of industries namely food industries, textile industries and chemical industries. The food effluent was earlier treated

Srinivas P. J.

using digester, which generated methane gas which was converted to energy and used in boiler of CETP thereby mitigating usage on fossil fuels. Under the current upgradation the said stream is used to break recalcitrant COD. Separate collection of effluent, treating it separately depending upon the nature of industry and conversion of methane gas generated through effluent treatment process to energy are some of the important steps implemented by CETP which are overlooked by the Committee.

6. It is true that there are 30 sumps / drainage chambers at different location within Naroda GIDC for conveyance of waste water from CETP member units to CETP. There is staggered timing for discharge of effluent in sumps for each member unit connected with CETP. Each member unit is given a slot depending upon the quantity of effluent generated by the member unit. Each member unit has a dedicated pipe line of 2 inch diameter which conveys effluent from the member unit to the collection sump. CETP does not

Suresh P. J.



accept any discharge from its members during the night time. Each member unit is required to install pump of 1440 rpm and of 5 hp. The combination of diameter of pipeline, capacity of pump at the industry, which releases collected effluent to the collection sump coupled with the time which is allotted to each member industry for which their designated valve is opened allowing effluent to enter the sump is enough to measure their hydraulic load. The samples from effluent which arrive in the sump are periodically taken and tested at the laboratory of the CETP. It is thus absolutely incorrect to say that there is no established mechanism to ensure the inlet quality non-compliance or hydraulic load compliance from member unit in the sumps / chambers. Since an established methodology of testing inlet quality as well as measuring hydraulic load is in place and is working efficiently, there is no need to install SCADA system. In any case, SCADA system also is not beyond its own faults and it does not even form a part of the CCA issued to the CETP. It is absolutely incorrect on part

Srinivas Patil

with the Committee to say that no regular monitoring of effluent quality in the 30 sumps is carried out. It is incorrect to state that waste water reaching CETP is by and large uncontrolled in terms of quality and quantity. A few photographs of some of 30 sumps are attached hereto and marked as **Annexure R-1**. As can be seen from the photographs, the sumps are closed, are kept locked, have a designated pipeline from each unit with valve that is sealed after each discharge. It is true that CETP collects sewage for treatment from residential area within and surrounding GIDC. Such collection is however to the tune of 1 MLD and not 0.7 MLD as claimed in the Report. The issue about sewage from residential area is dealt hereinafter in detail.

7. The report deals with status of consents to CETP in **Para 2.2**. I say that Rule 3 of the Environment (Protection) Rules, 1986 ("**the Rules**") provide for standards for emission or discharge of environmental pollutants. Rule 3 lays down that the standards for emission or discharge of environmental

Srinivas Reddy

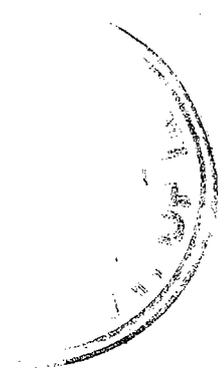


pollutants from industries, operations or processes shall be as specified in Schedule I to IV. Sub-Rule (2) of Rule 3 further states that the Central Board or State Board may specify more stringent standards from those provided in Schedule I to IV in respect of any specific industry, operation or process depending upon the quality of the recipient system and after recording the reasons, therefor in writing. Rule 3 further lays down that the standards for emission of discharge of environmental pollutants specified in sub-rule (1) of sub-rule (2) shall be complied with by an industry, operation or process within a period of one year of being so specified. So far as a CETP is concerned, the parameters and standards are laid down in Entry 55 of Schedule I of the Rules. It is pertinent to note that Inlet Quality Standards were prescribed for a CETP for the first time vide Notification dated 1st January, 2016, by stating that for each common effluent treatment plant, the State Board will prescribe Inlet Quality Standards for General Parameters, Ammonical Nitrogen and heavy metals as per design of the CETP and

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local needs and conditions. So far as CETP, Naroda is concerned, inlet norms came to be prescribed for the first time by amendment of Consent dated 24.11.2017. It is obvious that Inlet Quality Standards for CETP cannot be at variance with effluent standards of a member unit. Many of the member units of CETP Naroda fall in Entry 8 i.e dye and dye intermediate industries. Entry 55, Note 2 categorically lays down that maximum permissible fixed dissolve solids contribution by constituent units of CETP shall be 1000 mg/l. In cases, where FDS concentration in raw water used by constituent units is already high i.e. it is more than 1100 mg/l than the maximum permissible value for FDS in treated effluent shall be accordingly modified by the State Board. An extract from the Rules bearing relevant provisions is annexed hereto and marked **Annexure R-2**. Apart from this, the mega pipeline was conceived as an effective method of bringing down TDS/FDS of industrial effluent by diluting it with sewage water of municipal area before its discharge into the river.

Sham Patil



While specifically dealing with the status of consents to CETP, the committee has failed to take into account the following apparent errors in consent itself in teeth of statutory provisions.

- The inlet parameter of 100 units for colour is also misplaced considering that colour is neither a general parameter nor a specific parameter in Entry 55 and considering that the corresponding parameter for colour is 400 in Entry 8.
- As per entry 55, Inlet Quality Standards can be prescribed only in respect of General Parameters, Ammonical Nitrogen and Heavy metals. Prescribing of inlet quality standards in respect of Temperature, colour, suspended solids, Oil and grease, phenolic compounds, Sulphides, Total Chromium, Hexavalent Chromium is thus ex facie misplaced, uncalled for and amounts to overreaching the Rules.

Shri Patil

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- FDS once again does not find a corresponding parameter so far as dye and dye intermediate industry is concerned.
 - pH standard of 6.5 to 8.5 is contrary to the standard of 6-9 prescribed in entry 55.
 - The outlet norms for temperature is 40 degree centigrade as against the statutory requirement, which states that the temperature shall not exceed more than 5 degree above ambient water temperature.
 - So far as total chromium is concerned, there is no corresponding standard in entry 55.

Apart from the above, Rule 3(2) mandatorily requires that the State Board may specify more stringent standards from those provided in Schedule I to IV only in respect of any specific industry, operation or process depending upon the quality of recipient system and after recording reasons therefor in writing. In the instant case, GPCB has not recorded any reasons in writing for prescribing standards

S. S. Patil

different than those prescribed in the Schedules. The Committee has erred in overlooking the aforesaid deviations and contradictions.

The bifurcation of waste water quantity received by CETP as mentioned in the report is again erroneous. The committee has mentioned that the CETP receives around 2 MLD waste water from Chemical Industries, 0.5 MLD from food industries other than Havmore Ice Cream Private Limited , 0.5 to 0.7 MLD domestic waste water from surrounding of GIDC and 0.8 to 1 MLD from Havmor/Prem Industries. As a matter of fact, CETP receives around 0.50 MLD from food industries including Havmor Ice cream Pvt. Ltd., 1.00 MLD from Prem Industries , 1.50 MLD from Chemical Industries and 1.00 MLD domestic waste water from surrounding areas of GIDC. The CETP treats 1.00 MLD of untreated sewage and domestic waste water from the residences situated within and around GIDC which was otherwise being discharged

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untreated into Kharicut canal by the Ahmedabad Municipal Corporation.

8. Treatment Scheme in CETP, which is mentioned in **Para 2.3, 2.3.1 and 2.3.2** establish that a proper and effective system of treatment is in existence.

9. So far as the issue about discharge of treated effluent and quality of mega pipeline in Sabarmati river discussed in **para 2.3.3. of the report** is concerned, the committee has wrongly mentioned that the mega pipeline is 23 km long. The length of the mega pipeline is 33 kms. The Hydraulic load of CETP, Naroda in the mega pipeline, is roughly 10% to 12%, which cannot be considered to be significant. I say that the quality of effluent, which is discharged from the mega pipeline to Sabarmati river, has seen constant improvement as is clear from the data produced by the Committee. In fact the Committee has committed a grave error in looking at the average and not the trend, which

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would reveal that the parameters are only improving. In any case, respondent No. 1 is only one of the constituents discharging treated effluents into mega pipeline, and the quality of final outfall from the megapipeline to the river is not attributable to Respondent no. 1 alone.

10. So far as the issue of sludge management discussed in **Para 2.3.4 of the Report** is concerned, it is stated that as per CPCB Criteria for Hazardous Landfills, all hazardous waste management sites are required to be kept capped with the final cover/intermediate cover and landfilling operations remain suspended during monsoon. GPCB also addresses letters to operators of landfill sites on monsoon planning of landfill sites requiring them to cap the phase with a cover. Copies of relevant extract from Criteria for Hazardous Landfills issued by CPCB in February 2001, letter dated 11.06.2020 addressed by GPCB to Eco Care Infrastructure Pvt. Ltd. and copy of the letter dated 02.10.2020 addressed by Eco Care informing the answering respondent that their TSDF site was closed from 26.05.2020 and that it will be

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expected to re-open on 20.10.2020 are annexed hereto and marked **Annexure R-3 Collectively**. The committee itself has recorded that from November 2019 to July 2020 NEPL has disposed of 7492 MT sludge to Eco Care and 3542 MT to Detox India. The period during which the committee visited was the period of monsoon. It was on account of monsoon as well as prevailing COVID situation, which restricted transportation that the sludge was collected in a separate earmarked area. The committee has also recorded that the leachate was in a temporary storage area and that from such temporary storage area it was transferred to CETP inlet. The image purported to be of 2019 also appears to be of monsoon season. It was on account of such peculiar circumstances that the sludge was stored. The removal of sludge resumed from 27.09.2020. Since then, approximately 100 mt of sludge was disposed of to Detox India. In any case, the sludge was well protected from rain through tarpaulin cover and RCC flooring. As observed by the Committee, seepage, if any, is well managed by treating at

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CETP. Hence the apprehension of percolation in ground is baseless.

It is unfortunate, if not surprising, that the Report prepared by a committee consisting of officials of CPCB and GPCB has made such allegations in its report without reference to the existing operational framework for disposal of hazardous waste management.

11. **Para 2.4 of the Report** deals with upgradation of CETP in last year. As it explained in detail in the reply filed earlier as also on the basis of Annexures thereto, CETP has undertaken major upgradation to achieve optimum parameters. NEPL has appointed M/s Bio Petrochem INC from Israel for the upgradation since 2017. The work started in 2017 and after achieving the performance guarantee, NEPL has spent around nearly Rs.18 Crores for retrofitting and enhancement of treatment facilities. The GPCB official have been visiting and have taken inspection of upgradation work and progress of the project. The technology upgradation is so capable that it would successfully bring down COD value of 4000 to 5000

Srinivas Reddy

mgl to less than 250 mgl . Copy of second phase proposal presented by Bio Petrochem is attached hereto and marked as **Annexure - R-4**. The committee, however, is not right in saying that retrofitting work was done in last year. The work is going on since 2018, well within the knowledge of GPCB. During the retrofitting work, some of the equipments, tanks at CETP do remain out of operation which may lead to variation in parameter. It does not need elaboration to state that while retrofitting work is under implementation, the intake of effluent for treatment has to remain the same for the installed machinery to function efficiently and also to test the performance of new technology . The upgradation work has slowed down due to pandemic since March 2020. The work is expected to be completed by middle or end of 2021 depending upon global pandemic situation.

12. So far as **Para 2.5 of the Report** with respect to monitoring of CETP is concerned, the Committee has erred in mentioning TDS and colour in the chart of parameters as

Srin P. J.

none of them figure in the statutory parameters mentioned in Entry 55 of Schedule 1 of Rules. So far as the TDS is concerned, it is not part of even the consent. The location for collection of samples also is unusual. Sample 5 appears to have been taken from Inlet of ACT 1 and not from Outlet of ACT 1. Committee ought not to have drawn sample from ASP outlet (sample 9). Aerator cum Clarifier together constitutes ASP which is an intermediate stage of treatment. Sample of BOD or COD is not and should not be taken from such an intermediate stage as any such sample will give an unreal impression. In any case result of COD or BOD at such an intermediate stage is of no significance. Sample from ASE is usually taken only of MLSS (Mixed Liquor Suspended Solids) which shows biomass strength of the aerator. Reporting BOD, COD at a high value in sample 5 gives an unreal impression. The samples were drawn on 08.08.2020. The comparative analysis of online monitoring system on the said date shows result of BOD well within the parameter of 30 as against 60 as noted in the committee report at the

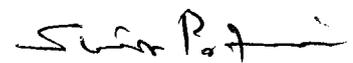
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outlet of CETP. The parameter of FDS is also unrealistic as it is fixed without taking into consideration the FDS of the raw water and there is no application of any prescribed or scientific formula for deriving FDS in case of Respondent No.1. The committee is wrong in saying that cumulatively the average daily quality of waste water intake from members may be higher than the recorded monitoring results in the holding tanks. Pertinently, in cases of none the member units, FDS is even tested as is clear from Annexure VIII.

13. In **Para 2.5.1.1**, the Committee has elaborated on inlet results of CETP. It is submitted that the entire analysis and the chart is misplaced. As is stated herein above, there were no inlet parameters for CETP till 27.11.2017. Rule - 3 of the Rules require that the standards of emission or discharge of environmental pollutants specified in sub rule (1) or sub-rule (2) shall be complied with by an industry within a period of one year of being so specified. In the circumstances, inlet

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parameters of 2015, 2016, 2017 and 2018 cannot be looked at or highlighted as variations. So far as 2019 and 2020 are concerned, retrofitting work has been under progress within knowledge of GPCB, which would result in intermittent variations of prescribed norms. It is thus incorrect to say that discharge norm is not achieved for CETP in last five years. It would be incorrect to say that CETP inlet effluent quality is consistently exceeding the prescribed standards in CC and A except sporadic instances for a few parameters. In any case, such observations stand contradicted even by the data which is produced in Annexure - VIII. The said Annexure - VIII which contains various monitoring reports of 119 units during the period from 2019 and 2020 shows that except for some negligible variations in BOD and COD by few units, by and large, the parameters are met with by more than 95% members as per data mentioned in the Report itself. When 95% of the members are meeting their outlet parameters it is absurd to contend that inlet parameters of CETP are not



met with. So far as TDS is concerned, the respondent reiterates that the TDS is not a prescribed parameter.

14. The report mentions result of outlet parameters of CETP from 2015 to 2020 in Annexure – VII. The said table is based on samples taken and analyzed by GPCB. The respondent submits that the said samples have been taken in absolute violation of procedure for taking sample as laid down in the Rules. Rule - 6 lays down that the officer empowered to take sample under Section 11 shall collect the sample in sufficient quantity to be divided into two uniform parts and effectively seal and suitably mark the same and permits the person from whom the sample is taken to add his own seal and on all or on any of its part. It also requires that one portion is to be handed over to the person from whom the sample is taken under acknowledgement. Rule -8 prescribes the procedure for submission of samples for analysis and the form of laboratory report thereupon. So far as NEPL is concerned, it has been consistent experience that GPCB does

Suman Prasad

not give second part of the sample sealed and marked by it to NEPL. Respondent No. 1 had protested to this fragrant violation of procedure on number of occasions in writing as well as orally. Copies of letter dated 29.05.2019 addressed by NEPL to law officer, GPCB as well as copy of email dated 14.08.2019 addressed to the member secretary of GPCB are annexed hereto and marked **Annexure R-5 Collectively**. It is an established principle of law that if a particular thing is required to be done in law in a particular manner it has to be done in that way or not at all. Violation of mandatory procedure in drawing samples, which allows the person from whom the samples is drawn to keep a part of the sample and get it analyzed, results in making the results of such test unreliable, robbing them of all evidentiary value. Parallel can be drawn from instances of violations in following mandatory procedure in respect of Food Adulteration Laws, Drugs and Cosmetics laws and the like. Additionally, in the case of respondent no. 1, GPCB has corrected his own declared result after protest by the Respondent, conceding to an error

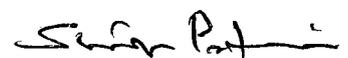


in analysis with regard to protocol of testing regarding sample dated 08.07.2020 and has changed result of 740 mg/l COD to 450mg/l. Surprisingly, the committee has not mentioned this report in the data placed before this Hon'ble Tribunal.

CPCB has issued guidelines dated 07.11.2014 requiring industries/CETPs to install Online Continuous Effluent Monitoring System (OCEMS) and has also published a list of authorized vendors. The said guidelines require OCEMS to be linked to the website of CPCB. A copy of the Guidelines for Online Continuous Effluent Monitoring System for Effluents dated 07.11.2014 issued by CPCB is annexed hereto and marked **Annexure 6**. NEPL has installed OCEMS connected to CPCB server from a recognized vendor at the cost of Rs.15.75 lacs. A copy of tax invoice dated 05.05.2017 issued by Next Engineering to NEPL is annexed hereto and marked **Annexure R-7**. NEPL recently requested the said agency for a copy of entire data from installation till today. The said



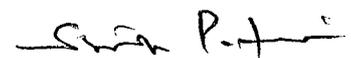
agency shared such data with NEPL vide email dated 02.10.2020 copy whereof is annexed hereto and marked **Annexure R- 8**. The data shared which records parameters of BOD, COD, TSS, temperature and pH for the period from 14.05.2017 to 02.10.2020 consist of approximately 3800 pages. Copies of available reports uploaded online corresponding to the dates which are mentioned in the report at Annexure-VIII and of 08.08.2020 i.e. the date of visit of committee are annexed hereto and marked **Annexure R- 9**. Reports of OCEMS of some of the dates mentioned in the Report are not available on account of the system being non operative on those days. The aforesaid data shows stark difference between the results of final outlet of CETP as per reports of GPCB which are mentioned in Annexure-VII. Such stark difference is sufficient to discard veracity of the Report of GPCB. In any case such data of GPCB cannot be relied on for the purpose of assessing the performance of CETP. The results are also unreliable when



compared to results generated by automated on line monitoring system at the outlet CETP.

The results from OCEMS are uploaded every 15 minutes on the server of CBCB and CBCP also issues alerts to concerned industries on the basis of such updates. The committee consisted of officials of GPCB as well as CPCB. Yet such records of monitoring which are with CPCB have not been acknowledged in the report of the committee. Despite GPCB being represented in the committee through its nominated official, the fact of having conceded to error in its test reports has not been disclosed in the report of the committee.

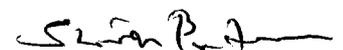
15. **Para 3 of the report** deals with inspection of member units. The committee randomly selected three units. Results of none of the said three industries show violation of parameters. So far as Amishi Drugs is concerned, the parameters in the collection tank are all well within the norms. The insinuation that the COD reduction upto 90% in



addition tank is highly unlikely is without any basis, remains unsubstantiated and needs to be overlooked considering that COD in the collection tank is almost 1/4 of the CETP inlet norms. Committee has also reported that the unit has an in house MEE. In any case, the Committee itself has noted that last one year monitoring result of GPCB data base reflects that the units is compliant for CETP inlet norms.

So far as Arun Dye Stuff Industries is concerned, the committee has erred in referring to TDS as it is not an inlet norm in case of member industries which is in the category dye and dye intermediate. So far as FDS is concerned, it is not even tested and does not find mention in table 9. In any case, in this case also, the committee has observed that last one year monitoring results of GPCB data base reflects that the unit is compliant of CETP inlet norms.

So far as Chinmay Chemical is concerned, it is again compliant of CETP inlet norms as per last one year monitoring results. The variation of COD is very minor and in



any case, collection tank shows COD to be well within norms. The same applies to the parameters of Oil and Grease.

16. In **Para -3.4 of the report**, the committee has referred to analysis of results of past two year of CETP member industries. As stated herein above, the said analysis shows that the inlet norms are by and large consistently met by all the industries.

17. The Committee has given its conclusions in **para - 4**. The answering respondent denies that CETP receives higher wastewater quantity than permitted in consent. The said increase is because of 1 MLD of sewage intake under instruction of the Ahmedabad Municipal Corporation. The management of sludge within CETP is properly done. The collection of sludge during visit of the Committee is on account of monsoon and the pandemic and is explained herein above. It is incorrect to say that CETP and several



member units are none compliant in terms of wastewater discharge quality. While taking note of the fact that CETP has taken initiative for improvement, the committee has overlooked many other efforts which are being made by CETP for pollution control and for preservation of environment. It is denied that monitoring data of past 5 years shows that CETP is consistent in violation of the discharged norms. It is denied that there is no established mechanism to control the quality of waste water from member units. It is denied that the CETP and its member units are contributor for deterioration of river water quality due to failure in achieving the stipulated regulating norms.

18. So far as the steps which are recommended by the Committee is concerned, the answering respondent responds to the same as under.

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- (a) The CETP and the member units are meeting discharge norms for waste water and is consistently augmenting waste water system.
- (b) An action plan for improvement in waste water collection and treatment is already under implementation.
- (c) An effective mechanism for monitoring of effluent quality of waste water tankers is in place, both in respect of what comes to MEE and spray dryer and the one that comes to the sumps. Hydraulic load of each of the member units and effluent quality is regularly assessed.
- (d) and (e) The sludge collection observed by the committee was a monsoon phenomenon and as per guidelines issued by CPCB and direction issued by GPCB. NELP has started disposal of accumulated sludge from 27.09.2020.
- (f) Colour is not a parameter that can be prescribed as per Entry 55 of Schedule I of the Rules. The parameter of 100 mg/l of colour in consent is without recording reasons and

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hence needs to be discarded. In any case, said norm is contrary to the outlet norms of dye and dye intermediates industries which is for 400.

(g) An augmentation plan for overall operational effectiveness is already under implementation.

(h) CETP has a mechanism in place to ensure inlet quantity norms compliance and hydraulic load compliance for member units in sumps and chambers.

(i) FDS monitoring would be done strictly at the outlet of member units, inlet of CETP, outlet of CETP. It is not possible for NEPL to monitor at the end of outfall of mega pipe line. However, such an expectation is unwarranted considering that FDS is not a parameter for majority of the members of the respondent CETP.

What is stated hereinabove is true and correct and nothing material is concealed therefrom. I state that all the annexures to the present affidavit are true copies of their respective originals.

Suman Patil

Solemnly affirmed at Ahmedabad on this 8th day of October 2020

Sun P. A.
DEPONENT

VERIFICATION

Verified at Ahmedabad on this 8th day of October 2020. I say that the contents of this affidavit are true and correct to the best of my knowledge and I believe the same to be true and that nothing material has been concealed there from.

Sun P. A.
DEPONENT



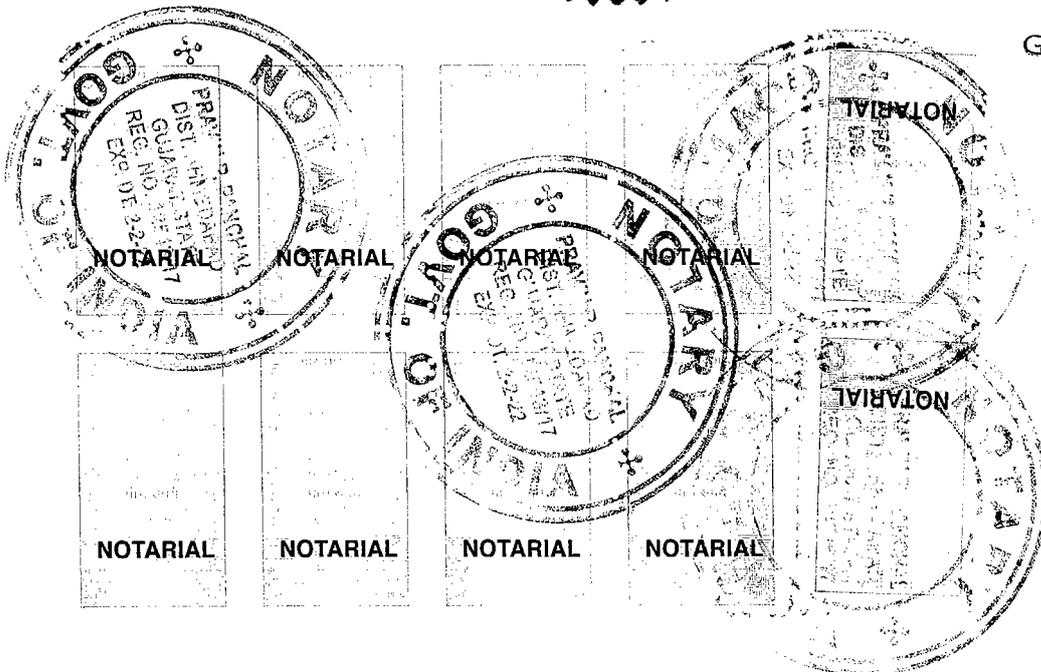
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PAGE No. *785*

Pravin P. Banchhal
PRAVIN P. BANCHHAL
NOTARY
GOVT. OF INDIA

08 OCT 2020

SOLEMNLY AFFIRMED
BEFORE ME
Pravin P. Banchhal
PRAVIN P. BANCHHAL
NOTARY
GOVT. OF INDIA

08 OCT 2020
31



Opening Lock Of Sump No.1 Having 5 Industries.



Opening Seal Of Valves For Accepting Discharge Of Effluent.



Colsing Of Valve After Discharge With Our Seal



The Environment (Protection) Rules, 1986¹ (Environment (Protection) Rules, 1986)

[As amended up to G.S.R. 952(E), dt. 26-12-2019]

[19th November, 1986]

In exercise of the powers conferred by Sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules, namely:—

1. Short title and commencement.—(i) These Rules may be called the Environment (Protection) Rules, 1986.

(ii) They shall come into force on the date of their publication in the Official Gazette.

2. Definitions.—In these rules, unless the context otherwise requires,—

(a) "Act" means the Environment (Protection) Act, 1986 (29 of 1986);

²[(aa) "areas" means all areas where the hazardous substances are handled;]

(b) "Central Board" means the Central Board for the Prevention and Control of Water Pollution constituted under Section 3 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974);

(c) "Form" means a form set forth in Appendix A to these rules;

(d) "Government Analyst" means a person appointed or recognised as such under Section 13;

(e) "person" in relation to any factory or premises means a person or occupier or his agent who has control over the affairs of the factory or premises and includes in relation to any substance, the person in possession of the substance;

³[(ee) "prohibited substance" means the substance prohibited for handling;]

(f) "recipient system" means the part of the environment such as soil, water, air or other which receives the pollutants;

⁴[(ff) "restricted substance" means the substance restricted for handling;]

(g) "section" means a section of the Act;

(h) "Schedule" means a Schedule appended to these rules;

(i) "Standards" means standards prescribed under these rules;

(j) "State Board" means a State Board for the Prevention and Control of Water Pollution constituted under Section 4 of the Water (Prevention and Control of Water Pollution) Act, 1974 (6 of 1974) or a State Board for the Prevention and Control of Air Pollution constituted under Section 5 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981).

3. Standards for emission or discharge of environmental pollutants.—(1) For the purposes of protecting and improving the quality of the environment and preventing and abating environmental pollution, the standards for emission or discharge of environmental pollutants from the industries, operations or processes shall be as specified in ⁵[Schedules I to IV].

⁶[* * *]

(2) Notwithstanding anything contained in sub-rule (1), the Central Board or a State Board may specify more stringent standards from those provided in ²[Schedules I to IV] in respect of any specific industry, operation or process depending upon the

quality of the recipient system and after recording reasons therefor in writing.

⁸[(3) The standards for emission or discharge of environmental pollutants specified under sub-rule (1) or sub-rule (2) shall be complied with by an industry, operation or process within a period of one year of being so specified.

⁹[(3-A) (i) Notwithstanding anything contained in sub-rules (1) and (2), on and from the 1st day of January, 1994, emission or discharge of environmental pollutants from the ¹⁰[industries, operations or processes other than those industries, operations or processes for which standards have been specified in Schedule I shall] not exceed the relevant parameters and standards specified in Schedule VI:

Provided that the State Boards may specify more stringent standards for the relevant parameters with respect to specific industry or locations after recording reasons therefor in writing.

(ii) The State Board shall while enforcing the standards specified in Schedule VI follow the guidelines specified in Annexures I and II in that Schedule.]

¹¹[(3-B) The combined effect of emission or discharge of environmental pollutants in an area, from industries, operations, processes, automobiles and domestic sources, shall not be permitted to exceed the relevant concentration in ambient air as specified against each pollutant ¹²[in Columns (4) and (5) of Schedule VII].]

(4) Notwithstanding anything contained in sub-rule (3),—

(a) the Central Board or a State Board, depending on the local conditions or nature of discharge of environmental pollutants, may, by order, specify a lesser period than a period specified under sub-rule (3) within which the compliance of standards shall be made by an industry, operation or process;

(b) the Central Government in respect of any specific industry, operation or process, by order, may specify any period other than a period specified under sub-rule (3) within which the compliance of standards shall be made by such industry, operation or process.

(5) Notwithstanding anything contained in sub-rule (3), the standards for emission or discharge of environmental pollutants specified under sub-rule (1) or sub-rule (2) in respect of an industry, operation or process before the commencement of the Environment (Protection) (Amendment) Rules, 1991, shall be complied by such industry, operation or process by the 31st day of December, 1991.]

¹³[(6) Notwithstanding anything contained in sub-rule (3), an industry, operation or process which has commenced production on or before 16th May, 1981 and has shown adequate proof of at least commencement of physical work for establishment of facilities to meet the specified standards within a time-bound programme, to the satisfaction of the concerned State Pollution Control Board, shall comply with such standards latest by the 31st day of December, 1993.

(7) Notwithstanding anything contained in sub-rule (3) or sub-rule (6) an industry, operation or process which has commenced production after the 16th day of May, 1991 but before the 31st day of December, 1991 and has shown adequate proof of at least commencement of physical work for establishment of facilities to meet the specified standards within a time-bound programme, to the satisfaction of the concerned State Pollution Control Board, shall comply with such standards latest by the 31st day of December, 1992.]

¹⁴[(8) With effect from the date specified hereunder, the following coal based thermal power plants shall be supplied with, and shall use, raw or blended or beneficiated coal with ash content not exceeding thirty-four per cent, on quarterly average basis, namely—

(a) a stand-alone thermal power plant (of any capacity), or a captive thermal power plant of installed capacity of 100 MW or above, located beyond 1000

kilometres from the pit-head or, in an urban area or an ecologically sensitive area or a critically polluted industrial area, irrespective of its distance from the pit-head, except a pit-head power plant, with immediate effect;

- (b) a stand-alone thermal power plant (of any capacity), or a captive thermal power plant of installed capacity of 100 MW or above, located between 750-1000 kilometres from the pit-head, with effect from the 1st day of January, 2015;
- (c) a stand-alone thermal power plant (of any capacity), or a captive thermal power plant of installed capacity of 100 MW or above, located between 500-749 kilometres from the pit-head, with effect from the 5th day of June, 2016:

Provided that in respect of a thermal power plant using Circulating Fluidised Bed Combustion or Atmosphere Fluidised Bed Combustion or Pressurized Fluidised Bed Combustion or Integrated Gasification Combined Cycle technologies or any other clean technologies as may be notified by the Central Government in the Official Gazette, the provisions of clauses (a), (b) and (c) shall not be applicable.

Explanation.—For the purpose of this rule,—

- (i) 'beneficiated coal' means coal containing higher calorific value but lower ash than the original ash content in the raw coal obtained through physical separation or washing process;
- (ii) 'captive thermal power plant' means a power plant which is set up by an industry to generate electricity for its exclusive use;
- (iii) 'critically polluted industrial area' means an industrial cluster or area where pollution levels have reached or likely to reach critical level, and has been identified as such by the Central Government or the State Government or the Central Pollution Control Board or a State Pollution Control Board;
- (iv) 'ecologically sensitive area' means an area whose ecological balance is prone to be easily disturbed and has been identified and notified by the Central Government;
- (v) 'installed capacity' shall be calculated by adding, individual capacity of all units within a boundary;
- (vi) 'pit-head power plant' means any captive or stand-alone power station having captive transportation system for its exclusive use for transportation of coal from the loading point at the mining end, up to the uploading point at the power station without using the normal public transportation system;
- (vii) 'stand-alone thermal power plant' means a power plant which is set up to generate electricity for feeding to electricity grid or for locations that are not fitted with an electricity distribution system; and
- (viii) 'urban area' means an area limit of a city having a population of more than one million according to the last census.]

► **Standards for emission of pollutants.**—State Boards are permitted to prescribe higher standards than those mentioned in the 1986 Rules but are not permitted to lower standards, *Akhil Bharat Goseva Sangh (3) v. State of A.P.*, (2006) 4 SCC 162.

► **Factual issues.**—Maharashtra Pollution Control Board, a statutory authority, cannot be disbelieved on factual issue of installation of electro static precipitators (ESPs), *Tatyasaheb Kore Warana S.S.K. Ltd. v. Sharad Baburao Patil*, (2011) 12 SCC 543.

4. Directions.—(1) Any direction issued under Section 5 shall be in writing.

(2) The direction shall specify the nature of action to be taken and the time within which it shall be complied with by the person, officer or the authority to whom such direction is given.

¹⁵[(3-a)] The person, officer or authority to whom any direction is sought to be issued shall be served with a copy of the proposed direction and shall be given an

opportunity of not less than fifteen days from the date of service of a notice to file with an officer designated in this behalf the objections, if any, to the issue of the proposed direction.

¹⁶[(3-b) Where the proposed direction is for the stoppage or regulation of electricity or water or any other service affecting the carrying on of any industry, operation or process and is sought to be issued to an officer or an authority, a copy of the proposed direction shall also be endorsed to the occupier of the industry, operation or process, as the case may be, and objections, if any, filed by the occupier with an officer designated in this behalf, shall be dealt with in accordance with the procedures under sub-rules (3-a) and (4) of this rule:

Provided that no opportunity of being heard shall be given to the occupier if he had already been heard earlier and the proposed direction referred to in sub-rule (3-b) above for the stoppage or regulation of electricity or water or any other service was the resultant decision of the Central Government after such earlier hearing.]

(4) The Central Government shall within a period of 45 days from the date of receipt of the objections, if any, or from the date up to which an opportunity is given to the person, officer or authority to file objections whichever is earlier, after considering the objections, if any, received from the person, officer or authority sought to be directed and for reasons to be recorded in writing, confirm, modify or decide not to issue the proposed direction.

(5) In a case where the Central Government is of the opinion that in view of the likelihood of a grave injury to the environment it is not expedient to provide an opportunity to file objections against the proposed direction, it may, for reasons to be recorded in writing, issue directions without providing such an opportunity.

(6) Every notice or direction required to be issued under this rule shall be deemed to be duly served —

(a) where the person to be served is a company, if the document is addressed in the name of the company at its registered office or at its principal office or place of business and is either—

(i) sent by registered post, or

(ii) delivered at its registered office or at the principal office or place of business;

(b) where the person to be served is an officer serving Government, if the document is addressed to the person and a copy thereof is endorsed to the Head of the Department and also to the Secretary to the Government, as the case may be, in charge of the Department in which for the time being the business relating to the Department in which the officer is employed is transacted and is either—

(i) sent by registered post, or

(ii) is given or tendered to him;

(c) in any other case, if the document is addressed to the person to be served and—

(i) is given or tendered to him, or

(ii) if such person cannot be found, is affixed on some conspicuous part of his last known place of residence or business or is given or tendered to some adult member of his family or is affixed on some conspicuous part of the land or building, if any, to which it relates, or

(iii) is sent by registered post to that person.

Explanation.—For the purposes of this sub-rule,—

(a) "company" means any body corporate and includes a firm or other association of individuals;

(b) "a servant" is not a member of the family.

5. Prohibition and restriction on the location of industries and the carrying on of processes and operations in different areas.—(1) The Central Government may take into consideration the following factors while prohibiting or restricting the location of industries and carrying on of processes and operations in different areas:

- (i) Standards for quality of environment in its various aspects laid down for an area.
- (ii) The maximum allowable limits of concentration of various environmental pollutants (including noise) for an area.
- (iii) The likely emission or discharge of environmental pollutants from an industry, process or operation proposed to be prohibited or restricted.
- (iv) The topographic and climatic features of an area.
- (v) The biological diversity of the area which, in the opinion of the Central Government needs to be preserved.
- (vi) Environmentally compatible land use.
- (vii) Net adverse environmental impact likely to be caused by an industry, process or operation proposed to be prohibited or restricted.
- (viii) Proximity to a protected area under the Ancient Monuments and Archaeological Sites and Remains Act, 1958 or a sanctuary, National Park, game reserve or closed area notified as such under the Wild Life (Protection) Act, 1972 or places protected under any treaty, agreement or convention with any other country or countries or in pursuance of any decision made in any international conference, association or other body.
- (ix) Proximity to human settlements.
- (x) Any other factor as may be considered by the Central Government to be relevant to the protection of the environment in an area.

(2) While prohibiting or restricting the location of industries and carrying on of processes and operations in an area, the Central Government shall follow the procedure hereinafter laid down.

(3) (a) Whenever it appears to the Central Government that it is expedient to impose prohibition or restrictions on the location of an industry or the carrying on of processes and operations in an area, it may, by notification in the Official Gazette and in such other manner as the Central Government may deem necessary from time to time, give notice of its intention to do so.

(b) Every notification under clause (a) shall give a brief description of the area, the industries, operations, processes in that area about which such notification pertains and also specify the reasons for the imposition of prohibition or restrictions on the location of the industries and carrying on of processes or operations in that area.

(c) Any person interested in filing an objection against the imposition of prohibition or restrictions on carrying on of processes or operations as notified under clause (a) may do so in writing to the Central Government within sixty days from the date of publication in the notification in the Official Gazette.

(d) The Central Government shall within a period of one hundred and twenty days from the date of publication of the notification in the Official Gazette consider all the objections received against such notification and may ¹⁷[within ¹⁸[five hundred and forty-five days ¹⁹[, and in respect of the States of Assam, Meghalaya, Arunachal Pradesh, Mizoram, Manipur, Nagaland, Tripura, Sikkim and Jammu and Kashmir in exceptional circumstance and for sufficient reasons within a further period of one hundred and eighty days,]] from such date of publication] impose prohibition or restrictions on location of such industries and the carrying on of any process or operation in an area.

²⁰[(4) Notwithstanding anything contained in sub-rule (3), whenever it appears to the Central Government that it is in public interest to do so, it may dispense with the requirement of notice under clause (a) of sub-rule (3).]

► **Industrial development and environmental protection.**—While issuing notification under this section Govt. should endeavour to strike a balance between ecological interests and economic, social and cultural interests. Industrial development at the cost of environmental degradation or environmental protection at the cost of industrial and economic growth not warranted, *Indian Council for Enviro-Legal Action v. Union of India*, (1996) 5 SCC 281.

► **Noise pollution.**—Court may issue directions in respect of controlling noise pollution even if such noise is a direct result of and is connected with religious services and activities, *Church of God (Full Gospel) in India v. K.K.R. Majestic Colony Welfare Assn.*, (2000) 7 SCC 282 : 2000 SCC (Cri) 1350.

Interference by the court in respect of noise pollution is premised on the basis that a citizen has certain rights being “necessity of silence”, “necessity of sleep”, “process during sleep” and “rest”, which are biological necessities and essential for health. Silence is considered to be golden. It is considered to be one of the human rights as noise is injurious to human health which is required to be preserved at any cost, *Farhd K. Wadia v. Union of India*, (2009) 2 SCC 442.

► **Environment clearances.**—Environment clearances had to be obtained after, and not before, the contract was awarded. Violation of CRZ notification could be decided by the competent authority while considering the application for clearance but the ancillary activities to be undertaken under the said contract could not be estopped by merely naming the same as real estate business, *Villianur Iyarkkai Padukappu Maiyam v. Union of India*, (2009) 7 SCC 561.

Environmental Impact Assessment (EIA) done and environmental clearance granted by expert authorities can only be quashed on well-recognised principles of judicial review i.e. only if there is any illegality, irrationality or procedural impropriety in granting such permission. However, if after setting up of plant, the plant begins/continues to pollute environment fundamental right under Art. 21 of Constitution can always be invoked, *Sterlite Industries (India) Ltd. v. Union of India*, (2013) 4 SCC 575.

KKNPP had been granted environmental clearance by various authorities prior to 1991 EIA Notification. 1991 EIA Notification did not prohibit projects already in operation and prior to date of issue of notification. 1994 Notification requires fresh environmental clearance and public hearing for expansion and modernisation because NPPs are covered under Schedule I. But in view of Explanation Note 8 to 1994 EIA Notification, said requirement would not be necessary for KKNPP Units 1 and 2 because plant capacity and sea water consumption always remained the same as envisaged in 1988 or 1998 Indo-Russian agreements. Further desalination plant is not also covered under Schedule I to 1994 EIA Notification. Further though a Circular dated 23-7-1998 of MoEF clarified that environmental clearance issued prior to 1994 EIA Notification would not be valid for cases where work had not commenced before 1-8-1998, KKNPP Units 1 and 2 are not such projects as per the inspection of KKNPP done by MoEF on 31-8-2001. Thus 1994 EIA Notification would not be applicable for KKNPP Units 1 and 2, *G. Sundarrajan v. Union of India*, (2013) 6 SCC 620.

²¹[**6. Procedure for taking samples.**—The Central Government or the officer empowered to take samples under Section 11 shall collect the sample in sufficient quantity to be divided into two uniform parts and effectively seal and suitably mark the same and permit the person from whom the sample is taken to add his own seal or mark to all or any of the portions so sealed and marked. In case where the sample is made up in containers of small volumes and is likely to deteriorate or be otherwise damaged if exposed, the Central Government or the officer empowered shall take two of the said samples without opening the containers and suitably seal and mark the same. The Central Government or the officer empowered, shall dispose of the samples so collected as follows:—

- (i) One portion shall be handed over to the person from whom the sample is taken under acknowledgement; and

(ii) the other portion shall be sent forthwith to the environmental laboratory for analysis.]

7. Service of notice.—The Central Government or the officer empowered shall serve on the occupier or his agent or person in charge of the place a notice then and there in Form I of his intention to have the sample analysed.

8. Procedure for submission of samples for analysis, and the form of laboratory report thereon.—(1) Sample taken for analysis shall be sent by the Central Government or the officer empowered to the environmental laboratory by registered post or through special messenger along with Form II.

(2) Another copy of Form II, together with specimen impression of seals of the officer empowered to take samples along with the seals/marks, if any, of the person from whom the sample is taken, shall be sent separately in a sealed cover by registered post or through a special messenger to the environmental laboratory.

(3) The findings shall be recorded in Form III in triplicate and signed by the Government Analyst and sent to the officer from whom the sample is received for analysis.

(4) On receipt of the report of the findings of the Government Analyst, the officer shall send one copy of the report to the person from whom the sample was taken for analysis, the second copy shall be retained by him for his records and the third copy shall be kept by him to be produced in the Court before which proceedings, if any, are instituted.

9. Functions of environmental laboratories.—The following shall be the functions of environmental laboratories:—

- (i) to evolve standardised methods for sampling and analysis of various types of environmental pollutants;
- (ii) to analyse samples sent by the Central Government or the officers empowered under sub-section (1) of Section 11;
- (iii) to carry out such investigations as may be directed by the Central Government to lay down standards for the quality of environment and discharge of environmental pollutants, to monitor and to enforce the standards laid down;
- (iv) to send periodical reports regarding its activities to the Central Government;
- (v) to carry out such other functions as may be entrusted to it by the Central Government from time to time.

10. Qualifications of Government Analyst.—A person shall not be qualified for appointment or recognised as a Government Analyst unless he is a—

- (a) graduate in science from a recognised university with five years' experience in a laboratory engaged in environmental investigations, testing or analysis; or
- (b) post-graduate in science or a graduate in engineering or a graduate in medicine or equivalent with two years' experience in a laboratory engaged in environmental investigations, testing or analysis; or
- (c) post-graduate in environmental science from a recognised university with two years' experience in a laboratory engaged in environmental investigations, testing or analysis.

11. Manner of giving notice.—The manner of giving notice under clause (b) of Section 19 shall be as follows, namely:—

- (1) The notice shall be in writing in Form IV.
- (2) The person giving notice may send notice to,—
 - (a) if the alleged offence has taken place in a Union territory—

- (A) the Central Board; and
- (B) Ministry of Environment and Forests (represented by the Secretary to the Government of India);
- (b) if the alleged offence has taken place in a State;
 - (A) the State Board; and
 - (B) the Government of the State (represented by the Secretary to the State Government in charge of environment); and
 - (C) the Ministry of Environment and Forests (represented by the Secretary to the Government of India);
- (3) The notice shall be sent by registered post acknowledgement due; and
- (4) The period of sixty days mentioned in clause (b) of Section 19 of the Environment (Protection) Act, 1986 shall be reckoned from the date it is first received by one of the authorities mentioned above.

22[12. Furnishing of information to authorities and agencies in certain cases.

—Where the discharge of environmental pollutant in excess of the prescribed standards occurs or is apprehended to occur due to any accident or other unforeseen act or event, the person in charge of the place at which such discharge occurs or is apprehended to occur shall forthwith intimate the fact of such occurrence or apprehension of such occurrence to all the following authorities or agencies, namely:—

- (i) The officer-in-charge of emergency or disaster relief operations in a district or other region of a State or Union territory specified by whatever designation, by the Government of the said State or Union territory, and in whose jurisdiction the industry, process or operation is located.
- (ii) Central Board or a State Board, as the case may be, and its regional officer having local jurisdiction who have been delegated powers under Sections 20, 21, 23 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and Section 24 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981).
- (iii) The statutory authorities or agencies specified in Column 3 in relation to places mentioned in Column 2 against thereof of the ²³[Schedule V].

24[13. Prohibition and restriction on the handling of hazardous substances in different areas.—(1) The Central Government may take into consideration the following factors while prohibiting or restricting the handling of hazardous substances in different areas:

- (i) The hazardous nature of the substance (either in qualitative or quantitative terms) as far as may be in terms of its damage causing potential to the environment, human beings, other living creatures, plants and property;
- (ii) the substances that may be or are likely to be readily available as substitutes for the substances proposed to be prohibited or restricted;
- (iii) the indigenous availability of the substitute, or the state of technology available in the country for developing a safe substitute;
- (iv) the gestation period that may be necessary for gradual introduction of a new substitute with a view to bring about a total prohibition of the hazardous substance in question; and
- (v) any other factor as may be considered by the Central Government to be relevant to the protection of environment.

(2) While prohibiting or restricting the handling of hazardous substances in an area including their imports and exports the Central Government shall follow the procedure hereinafter laid down:—

- (i) Whenever it appears to the Central Government that it is expedient to impose prohibition or restriction on the handling of hazardous substances in an area,

it may, by notification in the Official Gazette and in such other manner as the Central Government may deem necessary from time to time, give notice of its intention to do so.

- (ii) Every notification under clause (i) shall give a brief description of the hazardous substances and the geographical region or the area to which such notification pertains and also specify the reasons for the imposition of prohibition or restriction on the handling of such hazardous substances in that region or area.
- (iii) Any person interested in filing an objection against the imposition of prohibition or restrictions on the handling of hazardous substances as notified under clause (i) may do so in writing to the Central Government within thirty days from the date of publication of the notification in the Official Gazette.
- (iv) The Central Government shall within a period of sixty days from the date of publication of the notification in the Official Gazette consider all the objections received against such notification and may impose prohibition or restrictions on the handling of hazardous substances in a region or an area.]

NOTIFICATIONS

(1)

²⁵[**S.O. 330(E), dt. 15-4-1997.**—In exercise of the powers conferred under sub-section (1) of Section 3 and clause (d) of sub-section (2) of Section 6 of the Environment (Protection) Act, 1986 (29 of 1986), read with Rule 13 of the Environment (Protection) Rules, 1986, the Central Government hereby prohibits from the date of publication of this notification the import of the hazardous wastes, listed in the Table below:—

TABLE

Wastes containing the following as constituents or the wastes bearing the following as contaminants:

Beryllium
Selenium
Chromium (Hexavalent)
Thallium

Wastes containing:

Pesticides, herbicides and insecticides and their intermediates/residues thereof including outdated pesticides.]

(2)

²⁶**S.O. 899(E), dt. 13-10-1998.**—In exercise of the powers conferred by sub-section (1) of Section 3 and clause (d) of sub-section (2) of Section 6 of the Environment (Protection) Act, 1986 (29 of 1986), read with Rule 13 of the Environment (Protection) Rules, 1986, the Central Government hereby prohibits import of hazardous wastes specified in the said Table from the date and publication of this notification in the Official Gazette.

TABLE

1. Wastes containing or contaminated with Polychlorinated biphenyls (PCB), Polychlorinated terphenyls (PCT), Polybrominated biphenyls (PBB) other than the waste oil; and

2. Waste asbestos (dust and fibre).

²⁷[**14. Submission of environmental [statement]**²⁸.—Every person carrying on an industry, operation or process requiring consent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) or both or

authorisation under the Hazardous Wastes (Management and Handling) Rules, 1989 issued under the Environment (Protection) Act, 1986 (29 of 1986) shall submit an environmental [statement]²⁹ for the financial year ending the 31st March in Form V to the concerned State Pollution Control Board on or before the ³⁰[thirtieth day of September] every year, beginning 1993.]

³¹[**SCHEDULE I**]

(See Rule 3)

Sl. No.	Industry	Parameter	Standards
1	2	3	4
1.	CAUSTIC SODA INDUSTRY	Total concentration of mercury in the final effluent* Mercury bearing waste-water generation (flow) pH	Concentration not to exceed milligramme per litre (except for pH and flow) 0.01 10 kilolitres/tonnes of caustic soda produced 5.5 to 9.0
			*Final effluent is the combined effluent from (a) cell house, (b) brine plant, (c) chlorine handling, (d) hydrogen handling, (e) hydrochloric acid plant
			³² [Environmental Standards for Man-Made Fibre Industry
2.	MAN-MADE FIBRE		A. Effluent Standards Concentration not to exceed, (in mg/1 except for pH and recovery of Sodium Sulphate)
			Inland Surface Water Land for Irrigation Marine Discharge
		pH	6.0-8.5 6.0-8.5 6.0-8.5
		Suspended Solids (SS)	100 100 100
		Biochemical Oxygen Demand (BOD - 3 days at 27°C)	30 100 100
		Zinc	5 5 15
			Note: The recovery of Sodium Sulphate shall not be less than 60% in Viscose Staple Fibre and Viscose Filament Yarn units.
			B. Emission Standards Concentration not to exceed, (in mg/Nm ₃)
		Volatile Organic Compounds including Dimethyl Formamide and Acrylonitrile (applicable for Acrylic fibre units only)	50

Note:

(a) The concentration of Carbon Disulphide (CS₂) and Hydrogen Sulphide (H₂S) in work environment shall not exceed 10 ppm, individually.

7. The TDS value with respect to treated effluent shall be 2100 milligramme per litre; however, in case where TDS in intake water is above 1100 milligramme per litre, a maximum contribution up to 1000 milligramme per litre shall be permitted provided the maximum value of 3100 milligramme per litre is not exceeded in the treated effluent.]

7.
[*
*
*]

40[**8. DYE AND DYE INTERMEDIATE INDUSTRY**

A. Emission Standards (Process)

Limiting concentration in milligramme/Normal cubic metre (mg/Nm₃), unless otherwise stated

Oxides of Sulphur (SO _x)	200
HCl (Acid Mist)	35
Ammonia (NH ₃)	30
Chlorine (Cl ₂)	15

Note.—All process vents shall have chimney height of at least two metres above the shed or building where equipment is installed.

B. Effluent Standards

Limiting concentration not to exceed in milligramme/litre (mg/l), except for pH, Temperature, Colour and Bioassay.

	disposal in surface water	in marine disposal	on land for irrigation
pH	6.0 to 8.5	5.5-9.0	5.5-9.0
Suspended Solids	100	—	200
Biochemical Oxygen Demand -BOD (3 days, 27°C)	30	100	100
Chemical Oxygen Demand (COD)	250	250	—
Ammonical Nitrogen as N	50	50	—
Temperature	shall not exceed 5°C above the receiving water		—
Colour (Hazen unit)	400	—	—
Mercury (Hg)	0.01	0.01	—
Hexavalent Chromium (Cr ₊₆)	0.1	1.0	—
Total Chromium	2.0	2.0	—

**54. SMALL PULP & PAPER EFFLUENTS
PAPER PLANT OF
CAPACITY UPTO 24000
MT/ANNUM:**

Category

- | | | |
|-------------------------------|-----------------------------|-------------------------------|
| A. *Agro-based | Total waste-water discharge | 200 Cum/Ton of paper produced |
| B. **Waste-paper based | —do— | 75 Cum/Ton of paper produced |

*The agro-based mills to be established from January 1992 will meet the standards of 150 cum/ton of paper produced.

**The waste-paper mills to be established from January 1992 will meet the standards of 50 Cum/Ton of paper produced.

⁹⁰[**55. COMMON EFFLUENT TREATMENT PLANTS (CETP)**

A. Inlet Quality Standards For each Common Effluent Treatment Plant (CETP), the State Board will prescribe Inlet Quality Standards for General Parameters, Ammonical-Nitrogen and Heavy metals as per design of the Common Effluent Treatment Plant (CETP) and local needs and conditions.

B. Treated Effluent Quality Standards Max. permissible values (in milligram/litre except for pH and Temperature)

Into inland surface water	On land for irrigation	Into sea water
---------------------------	------------------------	----------------

General Parameters

pH	6-9	6-9	6-9
----	-----	-----	-----

Biological Oxygen Demand, BOD ₃ , 27°C	30	100	100
---	----	-----	-----

Chemical Oxygen Demand (COD)	250	250	250*
------------------------------	-----	-----	------

Total Suspended Solids (TSS)	100	100	100
------------------------------	-----	-----	-----

Fixed Dissolved Solids (FDS)	2100*	2100*	NS*
------------------------------	-------	-------	-----

Specific parameters

Temperature, °C	Shall not exceed	not	Shall not exceed	not	Shall not exceed	not
-----------------	------------------	-----	------------------	-----	------------------	-----

	more than 5°C above ambient water temperature	more than 5°C above ambient water temperature	more than 5°C above ambient water temperature
Oil & Grease	10	10	10
Ammonical-Nitrogen	50	NS*	50
Total Kjeldahl Nitrogen (TKN)	50	NS*	50
Nitrate-Nitrogen	10	NS*	50
Phosphates, as P	5	NS*	NS*
Chlorides	1000	1000	NS*
Sulphates, as SO ₄	1000	1000	NS*
Flouride	2	2	15
Sulphides, as S	2	2	5
Phenolic compounds (as C ₆ H ₅ OH)	1	1	5
Total Chlorine Res.	1	1	1
Zinc	5	15	15
Iron	3	3	3
Copper	3	3	3
Trivalent Chromium	2	2	2
Manganese	2	NS*	2
Nickel	3	NS*	3
Arsenic	0.2	NS*	0.2
Cyanide, as CN	0.2	NS*	0.2
Vanadium	0.2	NS*	0.2
Lead	0.1	NS*	0.1
Hexavalent Chromium	0.1	NS*	0.1
Selenium	0.05	NS*	0.05
Cadmium	0.05	NS*	0.05
Mercury	0.01	NS*	0.01
Bio-assay test	As per industry specific standards	As per industry specific standards	As per industry specific standards

*NS-Not specified

Notes:

1. ✨Discharge of treated effluent into sea shall be through proper marine outfall. The existing shore discharges shall be converted to marine outfalls. In cases where the marine outfall provides a minimum initial dilution of 150 times at the point of discharge and a minimum dilution of 1500 times at a point 100 m away from discharge point, then, the State Board may relax the Chemical Oxygen Demand (COD) limit:

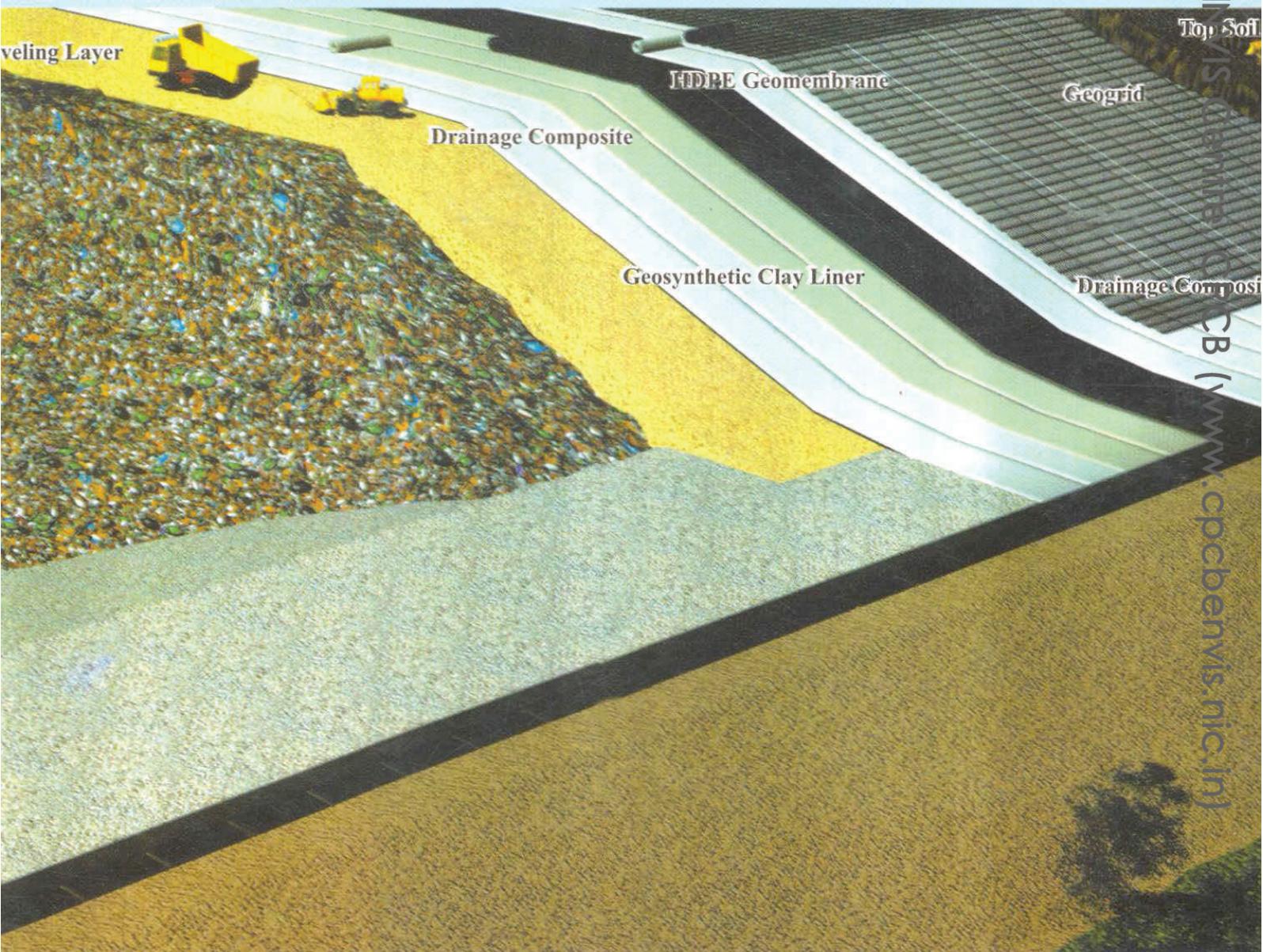
Provided that the maximum permissible value for Chemical Oxygen Demand (COD) in treated effluent shall be 500 milligram/litre.

2. ✨Maximum permissible Fixed Dissolved Solids (FDS) contribution by constituent units of a Common Effluent Treatment Plant (CETP) shall be 1000 milligram/litre. In cases where Fixed Dissolved Solids (FDS) concentration in raw water used by the constituent units is already high (i.e. it is more than 1100 milligram/litre) then the maximum permissible value for Fixed Dissolved Solids (FDS) in treated effluent shall be accordingly modified by the State Board.
3. In case of discharge of treated effluent on land for irrigation, the impact on soil and groundwater quality shall be monitored twice a year (pre- and post-monsoon) by Common Effluent Treatment Plants (CETP) management. For combined discharge of treated effluent and sewage on land for irrigation, the mixing ratio with sewage shall be prescribed by State Board.
4. Specific parameters for some important sectors, selected from sector-specific standards.

Sector	Specific Parametres
Textile	Bio-assay test, Total Chromium, Sulphide, Phenolic compounds
Electroplating Industries	Oil and Grease, Ammonia-Nitrogen, Nickel, Hexavalent Chromium, Total Chromium, Copper, Zinc, Lead, Iron, Cadmium, Cyanide, Fluorides, Sulphides, Phosphates, Sulphates,
Tanneries	Sulphides, Total Chromium, Oil and Grease, Chlorides
Dye and Intermediate	Dye Oil and Grease, Phenolic compounds, Cadmium, Copper, Manganese, Lead, Mercury, Nickel, Zinc, Hexavalent Chromium, Total Chromium, Bio-assay test, Chlorides, Sulphates,
Organic chemicals manufacturing industry	Oil and Grease, Bio-assay test, Nitrates, Arsenic, Hexavalent Chromium, Total Chromium, Lead, Cyanide, Zinc, Mercury, Copper, Nickel, Phenolic compounds, Sulphides
Pharmaceutical industry	Oil and Grease, Bio-assay test, Mercury, Arsenic, Hexavalent Chromium, Lead, Cyanide, Phenolic compounds, Sulphides, Phosphates.]

⁹¹ [56. DAIRY	Effluents	Concentration in mg/l, except pH	Quantum per product processed
	pH	6.5—8.5	—
	⁹² [BOD (3 days at 27°C)]*	100	—

CRITERIA FOR HAZARDOUS WASTE LANDFILLS



**CENTRAL POLLUTION CONTROL BOARD
MINISTRY OF ENVIRONMENT & FORESTS**

e-mail : cpcb@alpha.nic.in
Website : <http://envfor.nic.in/cpcb>

February, 2001

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DILIP BISWAS
Chairman

केन्द्रीय प्रदूषण नियंत्रण बोर्ड

(भारत सरकार का संगठन)

पर्यावरण और वन मंत्रालय

Central Pollution Control Board

(A Govt. of India Organisation)

Ministry of Environment & Forests

Phone : 2204948

FOREWORD

The Ministry of Environment & Forests, Government of India, has notified the Hazardous Waste (Management & Handling) Rules, in July 1989 under the Environment (Protection) Act, 1986. On 6th of January, 2000, major amendments to these rules with re-defined categories of hazardous wastes and harmonising them with the international laws, were notified. In order to facilitate implementation it is felt necessary to provide a set of guidelines on the Criteria for Hazardous Waste Landfills for the use of industries, implementing agencies and the general public.

The task of preparation of the guidelines was entrusted to a group comprising Prof. Manoj Datta, Indian Institute of Technology, New Delhi, Dr. D.B. Boralkar, Assistant Secretary, Central Pollution Control Board, Delhi and Ms. Sanchita Jindal, Joint Director (HSMD), Ministry of Environment & Forests, New Delhi. Useful criticism and suggestions were provided by National Productivity Council, New Delhi. The draft document was discussed and finalised by an Expert Committee under the Chairmanship of the Chairman, CPCB. The Expert Committee opined that secured disposal facilities need to be properly designed, constructed, commissioned and operated and that such facilities may not serve for the disposal of high-volume low-toxic waste. The present document provides guidance in respect of criteria for location, site selection and investigation, planning and design, waste acceptance, landfill liner system and cover, construction and operation, inspection, monitoring & record keeping, post-closure, financial assurance and contingency plan for emergencies.

This document on criteria for hazardous waste landfills has been brought out for use by implementing agencies, operators of landfills and others concerned.

(Dilip Biswas)

February, 2001

ENVIS Centre, CPCB (www.cpcbenvis.nic.in)

CRITERIA FOR HAZARDOUS WASTE LANDFILLS

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CRITERIA FOR HAZARDOUS WASTE LANDFILLS

1.0. APPLICABILITY

The criteria stated hereafter apply to owners and operators of facilities that dispose hazardous waste in landfills. The term 'hazardous waste landfill' (HW Landfill) is used to designate a waste disposal unit, designed and constructed with the objective of minimum impact to the environment. This term encompasses other terms such as "secured landfill", "engineered landfill", "waste mounds", "waste piles" etc.

2.0. LOCATIONAL CRITERIA

HW Landfills shall not be located within a certain distance of the following : lakes, ponds, rivers, wetlands, flood plains, highways, habitation, critical habitat area, water supply wells, Airports, coastal zone. If it is absolutely essential to site a landfill within the restricted zone, then appropriate design measures are to be taken and prior permission from the SPCB/PCC should be obtained :

- (a) Lake or Pond : No landfill shall normally be constructed within 200 m of any lake or pond. Because of concerns regarding runoff of waste contaminated water, a surface water monitoring network with approval of SPCB/PCC shall be established.
- (b) River : No landfill shall be constructed within 100 m of a navigable river or stream.
- (c) Flood Plain : No landfill shall be constructed within a 100 year flood plain. A landfill may be built within the flood plains of secondary streams if an embankment is built along the stream side to avoid flooding of the area. However, landfills must not be built within the flood plains of major rivers unless properly designed protection embankments are constructed around the landfills.
- (d) Highway : No landfill shall be constructed within 500 m of the right of way of any state or national highway.
- (e) Habitation : A landfill site shall be atleast 500 m from a notified habitated area. A zone of 500 m around a landfill boundary should be declared a no-development buffer zone after the landfill location is finalised.
- (f) Public parks : No landfill shall be constructed within 500 m of a public park.

- (g) Critical Habitat Area : No landfill shall be constructed within critical habitat areas including reserved forest areas. A critical habitat area is defined as the area in which one or more endangered species live. It is sometimes difficult to identify a critical habitat area. If there is any doubt then the SPCB/PCC shall be consulted for clarification.
- (h) Wetlands : No landfill shall be constructed within wetlands. It is often difficult to identify a wetland area. Maps may be available for some wetlands, but in many cases such maps are absent or are incorrect. If there is any doubt, then the SPCB/PCC shall be consulted for clarification.
- (i) Airports : No landfill shall be constructed within a zone around Airports as notified by the regulatory authority or the aviation authority.
- (j) Water Supply Well : No landfill shall be constructed within 500 m of any water supply well.
- (k) Coastal Regulation Zone : No landfill shall be sited in a coastal regulation zone.
- (l) Ground water table level : No landfill shall be located in areas where the ground water table will be less than 2 m below the base of the landfill.
- (m) Other criteria may be decided by the planners in consultation with SPCB/PCC commensurate with specific local requirements such as presence of monuments, religious structures etc.

3.0. SITE SELECTION

Hazardous waste landfills should preferably be located in areas of low population density, low alternative land use value, low ground water contamination potential and at sites having high clay content in the subsoil.

A HW landfill will be selected following the guidelines published by MoEF. The step by step procedure will be as follows :

- (i) Earmarking a 'search area' taking into account the location of the waste generation units and a 'search radius' (typically 5 to 250 km). The search area will be so chosen that it minimises the number of HW landfills in any region or state.
- (ii) Identification of a list of potential sites on the basis of:
 - (a) availability of land
 - (b) collection of preliminary data
 - (c) restrictions listed in the locational criteria (section 2.0).

(iii) Collection of preliminary data as follows :

- (a) Topographic Maps : A topographic map will help find sites that are not on natural surface water drains or flood plains. Topographical maps may be procured from Survey of India.
- (b) Soil Maps : These maps, primarily meant for agricultural use, will show the types of soil near the surface. They are of limited use as they do not show types of soil a few metre below the surface. They may be procured from Indian Agricultural Research Institute.
- (c) Land Use Plans : These plans are useful in delineating areas with definite zoning restrictions. There may be restrictions on the use of agricultural land or on the use of forest land for landfill purposes. Such maps are available with the Town Planning Authority or the Municipality.
- (d) Transportation Maps : These maps, which indicate roads and railways and locations of airports, are used to determine the transportation needs in developing a site.
- (e) Water Use Plans : Such maps are usually not readily available. A plan indicating the following items should be developed : private and public tubewells indicating the capacity of each well, major and minor drinking water supply line(s), water intake wells located on surface water bodies, and open wells.
- (f) Flood Plain Maps : These maps are used to delineate areas that are within a 100 year flood plain. Landfill siting must be avoided within the flood plains of major rivers.
- (g) Geologic Maps : These maps will indicate geologic features and bedrock levels. A general idea about soil type can be developed from a geological map. Such maps can be procured from Geological Survey of India.
- (h) Aerial Photographs / Satellite Imagery : Aerial photographs or satellite imageries may not exist for the entire search area. However such information may prove to be extremely helpful. Surface features such as small lakes, intermittent stream beds and current land use, which may not have been identified in earlier map searches, can be easily identified using aerial photographs.
- (i) Ground Water Maps : Ground water contour maps are available in various regions which indicate the depth to ground water below the land surface as well as regional

ground water flow patterns. Such maps should be collected from Ground water Boards or Minor Irrigation Tubewell Corporations.

- (j) Rainfall Data : The monthly rainfall data for the region should be collected from the Indian Meteorological Department.
 - (k) Wind Map : The predominant wind direction and velocities should be collected from the Indian Meteorological Department.
 - (l) Seismic Data : The seismic activity of a region is an important input in the design of landfills. Seismic coefficients are earmarked for various seismic zones and these can be obtained from the relevant BIS code or from the Indian Meteorological Department.
 - (m) Site Walk Over and Establishment of Ground Truths : A site reconnaissance will be conducted by a site walk-over as a part of the preliminary data collection. All features observed in various maps will be confirmed. Additional information pertaining to the following will be ascertained from nearby inhabitants : (a) flooding during monsoons; (b) soil type; (c) depth to G.W. table (as observed in open wells or tube wells); (d) quality of groundwater and (e) depth to bedrock.
 - (n) Preliminary Boreholes and Geophysical Investigation : At each site, as a part of preliminary data collection, one to two boreholes will be drilled and samples collected at every 1.5m interval to a depth of 20m below the ground surface. The following information will be obtained : (i) soil type and stratification; (ii) permeability of each strata; (iii) strength and compressibility parameters (optional); (iv) ground water level and quality and (v) depth to bedrock. In addition to preliminary boreholes, geophysical investigations (electrical resistivity/seismic refraction/others) may be undertaken to assess the quality of bedrock at different sites.
- (iv) Selection of two best ranked sites from amongst the list of potential sites on the basis of the ranking system stipulated by MoEF (1991).
 - (v) Environmental Impact Assessment for the two sites for the following parameters :
 - (a) ground water quality; (b) surface water quality; (c) air quality - gases, dust, litter, odour; (d) land use alteration; (e) drainage alteration; (f) soil erosion; (g) ecological

impacts (h) noise; (i) aesthetics - visual, vermin, flies; (j) traffic alteration; and (k) others.

- (vi) Assessment of public perception for the two sites.
- (vii) Selection of final site.
- (viii) The above site selection procedure shall not be applicable for location of facility within industrial areas of State Industrial Development Agencies. However EIA requirement will apply.

4.0. SITE INVESTIGATION CRITERIA

The data collected during site selection is not sufficient for landfill design. To be able to undertake detailed design of a landfill at a selected site, it is essential to characterise the landfill site and evaluate the parameters required for design. It is necessary that all data listed in Section 3.0 (iii) on "preliminary data" be collected for site characterisation. If some data has not been collected, the same should be obtained before site investigations are undertaken for site characterisation. The following additional data will be collected through a detailed site investigation programme at the chosen site.

A detailed site investigation programme will comprise of subsoil investigation, ground water/hydrogeological investigation, hydrological investigation, topographical investigation and geological investigation. The output expected from each investigation is listed below :

- (a) Subsoil Investigation : A detailed investigation plan may be drawn up in consultation with a geotechnical engineer. The output from such an investigation should yield the following :
 - (i) Stratification of subsoil - type of soil and depth
 - (ii) Depth to ground water table and bedrock (if located within 15m of base of landfill)
 - (iii) Permeability of various strata beneath the landfill.
 - (iv) Strength and compressibility properties of subsoil
 - (v) Extent of availability of liner material, drainage material, top soil and protective soil in adjacent borrow areas.
 - (vi) Subsoil properties along approach road.

A minimum of 3 boreholes per hectare of landfill area upto 15m beneath the base of the landfill shall be drilled and insitu tests as well as laboratory tests shall be performed for permeability, strength, compressibility and classification of soils. In addition, test pits and boreholes should be drilled at borrow area for liner and cover materials as well as along approach road.

waste will undergo due to overburden stress and due to bio-degradation (if any) shall also be taken into account.

The total landfill area should be computed on the basis of the designed height of the landfill (usually between 5 to 20m). Approximately 15 to 20% area more than the area required for landfilling should be adopted to accommodate all infrastructure and support facilities as well as to allow the formation of a green belt around the landfill. This additional area shall be computed separately and may be as high as 30% of the total area in case of small to medium landfills. The total landfill area is computed on trial and error basis.

There is no standard method for classifying landfills by their capacity. However the following nomenclature is often observed in literature :

Small size landfill	:	less than 5 hectare area
Medium size landfill	:	5 to 20 hectare areas
Large size landfill	:	greater than 20 hectare area.

5.4. Landfill Layout

A landfill site will comprise of the area in which the waste will be filled as well as additional area for support facilities. The area in which waste is to be filled may comprise of separate landfill units with each unit, accommodating a group of compatible wastes. Within each unit work may proceed in phases with only a part of the area under active operation. A typical site layout is shown in Fig.1. Such a layout must be prepared for all landfills. The following facilities must be located in the layout: (a) access roads; (b) equipment shelters; (c) weighing scales; (d) office space; (e) location of waste inspection facility (if used); (f) temporary waste storage and/or disposal sites for special wastes; (g) demarcation of the landfill areas and areas for stockpiling cover material and liner material; (h) location of surface water drainage facilities; (i) location of landfill leachate management facilities; (j) location of gas management facilities (optional); (k) location of monitoring wells/environmental monitoring facilities, (l) fencing and green belt along the peripheral boundary and (m) emergency exit.

It is essential that for each landfill site, a layout be designed incorporating the above mentioned facilities.

5.5. Landfill Section

Landfills may have different types of sections depending on the topography of the area. The landfills may take the following forms : (a) above ground landfills; (b) below ground landfill; (c) slope landfills; (d) valley landfills (canyon landfills); and (e) a combination of the above. Fig.2 shows some typical landfill sections.

It is recommended that the landfill section be arrived at keeping in view the topography, depth to water table and availability of liner and cover material. Above ground landfills shall be preferred to below ground landfills, as leachate collection in the former is by gravity flow and does not require the use of pumps.

Slope landfills and valley landfills are normally adopted in hilly areas; above-ground landfills in flat undulating ground and below-ground landfills in low-lying areas, depressions or pits.

5.6. Phased Operation

Before the main design of a landfill can be undertaken it is important to develop the operating methodology. A landfill is operated in phases because it allows the progressive use of the landfill area, such that at any given time a part of the site may have a final cover, a part being actively filled, a part being prepared to receive waste, and a part undisturbed.

For each landfill unit, a phased operation plan will be drawn up.

The term 'phase' describes a sub-area of the landfill. A 'phase' consists of cells, lifts, daily/weekly (optional) or intermediate cover, liner and leachate collection facility, gas control facility (optional) and final cover over the sub-area (Fig.3).

Each phase is typically designed for a period of 12 months. Phases are generally filled from the base to the final/intermediate cover and capped within this period leaving a temporary unrestored sloping face. Fig.4 shows a simplified sequence of phased operation.

A 'phase plan' shall be drawn up for the active life of the landfill as soon as the landfill layout and section are finalised. It must be ensured that each phase reaches the final cover/intermediate cover level at the end of its construction period and that it is capped before the onset of monsoons.

During the monsoon months the waste may stockpiled in a temporary holding areas (covered with roof). During this period and the landfill may be kept capped with the final cover/intermediate cover and landfilling operations suspended to reduce infiltration of rain water into the landfill. However, if the incoming waste quantity is too large for temporary stockpiling or the monsoon period lasts for a long period, special phases may have to be designed with high leachate handling capacity and special operating procedures adopted.

5.7. Estimation of Leachate Quantity

Leachate is generated on account of the infiltration of water into landfills and its percolation through waste as well as by the squeezing of the waste due to self weight. The quantity of leachate generated in a landfill

(iii) Vehicle Inspection :

Each vehicle carrying the waste shall be checked for :

- (a) Incoming weight (full)
- (b) Outgoing weight (empty)
- (c) Availability of relevant documents
- (d) Visual check at weigh-in (if feasible)
- (e) Visual inspection after discharge at tipping area (inspection report to be filed for each vehicle). A visual inspection checklist must be framed which should list visual features for identification of unacceptable material. This checklist shall be filled for every unloading by a vehicle in tipping area at the working phase in the landfill.

If there is reason to doubt the presence of unacceptable waste, the vehicle shall be taken to the waste inspection facility, the waste downloaded, inspected visually and sampled (if necessary). Vehicles having non-conforming waste shall be held-up and matter reported to engineer or manager at site.

8.3. Phase Development

Development of each phase shall be done in stages. These stages are:

- (a) Clearing the area of all shrubs and vegetation
- (b) Excavation (if required),
- (c) Stockpiling of excavated material and material imported from borrow area,
- (d) Levelling of base and side slopes of landfill and achieving desirable grades at the base of the landfill,
- (e) Construction of embankment and temporary berms along the perimeter of the phase,
- (f) Construction of temporary surface water drains,
- (g) Installation of monitoring instruments,
- (h) Liner Construction
- (i) Leachate collection and removal system

8.4. Phase operation

At the design stage, the phases of a landfill are clearly demarcated. Operation of a phase requires planning and execution of daily activities – daily waste filling plan and demarcation, waste discharge and inspection, waste placement, waste compaction, daily covering of waste, prevention of pollution and fires.

- (a) **Daily waste filling plan and demarcation at site :** On the completion of a phase and before the start of a new phase, a waste filling plan for daily cells shall be evolved. A study of the landfill base contour maps

and the final cover levels of the phase allows such a plan to be developed. If a phase is to be operational for 365 days, all 365 cells must be marked in plan and in sectional drawings. These may require revision as a landfill is constructed because waste quantities may vary in an unforeseen manner. The area and height proposed to be filled every day should be demarcated at the site on a daily or weekly basis using temporary markers or bunds.

- (b) **Waste discharge and inspection** : Waste shall be discharged by tipping at the working area of a landfill, within the area demarcated for the cell. Every discharged load shall be visually inspected by a designated operator. Working area personnel shall be trained and competent at waste identification in order that they can recognise waste which may be non-conforming. In the event of reasonable doubt as to the waste acceptability, the operator shall inform the waste reception facility and/or the site manager immediately and the consignment shall be isolated pending further inspection.
- (c) **Waste placement (spreading) and compaction** : Once waste has been discharged it shall be spread in layers and compacted in a well defined manner to ensure that the completed slopes of a daily cell are at the designed gradients. Waste placement (spreading) can be done by the following methods :
- (i) **Face tipping method** : Waste is deposited on top of existing surface and spread horizontally by tipping over an advancing face.
 - (ii) **Inclined layering method (onion skin tipping)** : Similar to (a) but inclined layering (gentle slope) done instead of advancing of face.
 - (iii) **Working upwards** : Waste is deposited on the lower surface and pushed upwards.

It is necessary to level and compact the waste as soon as it is discharged at the working area. Steel wheeled mobile landfill compactors (smooth / cleated / spiked / special wheels) are generally accepted as the best equipment for this purpose. They have largely replaced the small crawler-tracked machines which were previously in general use.

- (d) **Daily / Weekly Cover** : Daily / Weekly cover (optional) is primarily used for prevention windblown dust, litter and odours, deterrence to scavengers, birds, reduction of infiltration (during unseasonal rain) and in improving the site's visual appearance. Soil used as daily / weekly cover shall give a pleasing uniform appearance from the site boundary. To achieve this a thickness of about 150 mm is usually adequate and shall be adopted.
- (e) **Operation in Monsoons** : During the monsoon month, high rainfall results in excessive generation of leachate. Hence, before the onset of monsoons, the phase must be capped with a cover. Waste received

during monsoon months shall be stockpiled in temporary holding area (covered). Alternatively special “monsoon phases” may be designed with high leachate holding capacity and operated using daily covers / temporary covers.

8.5. Pollution Prevention and Safety During Operation

The following measures are needed to ensure that the landfill operation shall not adversely affect local environment within and outside the landfill.

- (i) **Traffic** : Heavy lorry traffic shall give rise to nuisance, damage to road surface and verges and routing problems. The following measures are helpful :
 - (a) routing to avoid residential area
 - (b) using one-way routes to avoid traffic conflict in narrow roads
 - (c) carrying out road improvements, for example strengthening or widening roads, improved provision of footpaths, improvement of sight lines, provision of passing places, provision of new roads,
 - (d) Limiting the number of vehicle movements
 - (e) Restrictions on traffic movement hours which are staggered with respect to peak traffic hours.
- (ii) **Noise** : Adverse impacts on the local community from noise may arise from a number of sources including : throughput of vehicles and fixed and mobile plant, for example compactors, generators at the site. Peripheral noise abatement site measures shall be adopted.
- (iii) **Odour** : Offensive odours at landfill sites may emanate from a number of sources, including waste material, which have decomposed significantly prior to landfilling, leachates and leachate treatment systems, and landfill gas. Good landfill practices shall greatly reduce general site smell and reduce impact from odours which could lead to complaints from the local community, site users and site staff. Good practice includes : (a) adequate compaction; (b) speedy disposal and burial of malodorous wastes; (c) effective use of appropriate types of daily cover; (d) progressive capping and restoration; (e) effective landfill gas management; (f) effective leachate management and (g) consideration of prevailing wind direction when planning leachate treatment plants, gas flares, and direction of tipping.
- (iv) **Litter** : Poor litter control both on and off site is particularly offensive to neighbours. Good operational practice shall be adhered to in terms of temporary fencing, waste discharge, placement, compaction and covering to minimise the occurrence of windblown litter.
- (v) **Bird Control** : Birds are attracted to landfill sites in large numbers where sites receive appreciable amounts of bio wastes. Measures which can be used to mitigate birds nuisance include the employment

owner/operator to the SPCB/PCC for verification and record keeping. The same will also be done upon the completion of cover system in each phase.

9.2. During Operation

- (a) The owner/operator shall monitor and keep a record of the following in the operation period :
- (i) Functioning of the leachate management system (including levels in leachate holding tank) (weekly)
 - (ii) Functioning of the surface water run-off system (weekly)
 - (iii) Functioning of the gas management system (if any) (weekly)
 - (iv) Waste filling records shall be kept on daily basis as specified in Section 8.2 on site procedure
 - (v) Environmental monitoring shall be done, 1 to 2 times a month, and all parameters listed in Section 5.17 shall be recorded and compared with the permissible limits provided by the SPCB/PCC
 - (vi) After a major storm, the occurrence of the storm and functioning of various systems shall be recorded.
- (b) The SPCB/PCC (or its nominee) shall inspect all facilities atleast twice a year. The owner/operator shall provide a copy of the environmental monitoring record to the SPCB/PCC on a yearly basis.

9.3. During Closure and Post Closure Period

Period inspection and routine maintenance at a closed landfill site shall be carried out for a period of 30 years after closure. The SPCB/PCC shall inspect all facilities during the closure and post closure period atleast once a year. The owner/operator shall provide a copy of the environmental monitoring record to the SPCB/PCC once a year. The following components of a closed landfill shall be inspected visually after landfill closure to confirm that all functional elements are working satisfactorily and inspection report will be recorded. A maintenance schedule with specified reporting formats is drawn up after each inspection.

- (a) Cover System : The final cover is inspected 2 to 4 times a year
- (a) to check that vegetation growth is occurring satisfactorily and that plants are not showing stunted growth,
 - (b) to detect if any erosion gullies have been formed thereby exposing the barrier

layers, (c) to earmark depressions that may have developed with time and (d) to identify ponding of water on the landfill cover. At least one inspection shall be carried out during or immediately after the peak of the monsoon season.

Closed landfills show significant settlement. Rectification measures shall not only re-establish the initial slope of the cover (for proper surface water run-off) but shall also ensure that all the components of the landfill cover system continue to perform as originally envisaged. Site managers shall have sufficient equipment and funds to periodically carry out maintenance work in the form of soil filling, re-grading the cover and revegetating the landfill cap.

In areas where extensive erosion gully formation is observed, filling of cover material, regrading of cover slopes and re-vegetation must be routinely undertaken.

- (b) **Surface Water Drainage System** : The surface water drainage system is also inspected 2 to 4 times a year (a) to identify cracks in drains due to settlements, (b) to delineate clogged drains requiring immediate clean-up and (c) to study the level of deposited soil in the storm water basin and initiate excavation measures. Broken pipes and extensively cracked drains may require replacement after filling soil beneath them to establish slopes for gravity flow. In extreme cases where long-term settlement shall be excessive, it shall become necessary to make sumps and operate storm water pumps for removal of accumulated water in the drainage system.
- (c) **Gas and Leachate Management Systems** : A weekly operating record of leachate and gas management systems shall be kept in the post-closure period. Periodic inspection of the leachate and gas collection systems (2 to 4 times a year) is undertaken to identify broken pipes, leaking gas (if any) and damaged or clogged wells/sumps. Repair work requires skilled manpower and shall be carried out by the agencies operating the gas treatment and leachate treatment facilities. One may often have to install new gas extraction wells and leachate collection wells if the damaged/clogged facilities are inaccessible and irreparable.

9.4. Environmental Monitoring Systems

Ground water monitoring wells, air quality monitoring systems and vadose zone monitoring instruments shall be periodically inspected 2-4 times a year to check that all systems are functioning satisfactorily and that well caps and sampling ports are not subjected to damage due to excessive settlement or vandalism.



GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN

Sector-10-A, Gandhinagar 382 010

Phone : (079) 23222425

(079) 23232152

Fax : (079) 23232156

Website : www.gpcb.gov.in

By R.P.A.D

No. GPCB/HAZ-GEN-294(8)/561872 Date: 11 JUN 2020

To,

M/s Eco care Infrastructures Pvt. Ltd.

Plot no/ Sr. no: 127/1,127/2,128, 132/1,132/2,131,

132/2/2,125/6,125/3, Village: Ghaspur,

Tal: Dasada, Dist: Surendranagar.

Sub: Monsoon Planning for Monitoring & Control of Pollution.

Sir,

As you are aware Monsoon is about to set in, you are required to make yourselves fully equipped and ready to take all required mitigation steps with regards to prevent and control pollution from various sensitive points and to ascertain that pollution is fully controlled at source. At the outset, following points are required to ascertain in your industry / facility in addition to routine monitoring and controlling pollution activities at source.

1. Before the onset of monsoons, the phase must be capped with a cover.
2. The facility shall comply with all other conditions mentioned in operation and maintenance of TSDF in CPCB guidelines.
3. The run off/storm water at various significant points, which lead to vital stretches of River, Nalas, Natural Drain etc. should be constantly monitored for its water quality assurance.
4. Final outlet of industry / Facility is also required to be monitored during rainy days to ensure that there is no irregular discharge by any means.
5. Effluent treatment plant units & chemical storage tanks / Hazardous waste storage sites etc. should be monitored to prevent that there is no overflow/leakage to the surrounding environment.
6. The Hazardous waste and other solid waste accumulated in storage site should be provided with complete waterproof cover/roof in order to avoid mix up of rainwater / industrial effluent with the solid waste and so as to prevent the excess leachate generation. You are also requested to dispose off all the accumulated hazardous waste /sludge to TSDF site or incinerate it as the case may be.
7. You are also required to implement relevant guidelines for management plan for used/discarded packaging materials etc.
8. You are required to monitor & operate Air Pollution Control equipments / measures efficiently in such a manner that any flue gas/process emission from your industrial plant / facility should conform the GPCB norms. Further, you are required to ensure that accidental leakage, fugitive emissions etc. are prevented.

Clean Gujarat Green Gujarat

ISO-9001-2008 & ISO-14001 - 2004 Certified Organisation

- 9. You are also required to ensure good housekeeping practices to avoid any chemical contamination of rain water and to avoid any uncertainties.
- 10. Development of green belt with regards to protect environment. Pre-Monsoon is the ideal time for the planning of the plantation. It would be pleasure to see "Green Belt Plan" along with the compliance report.

You are requested to make implementations of above referred conditions immediately and submit the report of the same to G.P.C.B. Head Office, Gandhinagar as well as our Regional Office.

You are also requested to submit the onsite emergency management plan and Annual Return in Form – IV under Hazardous and Other Wastes (M&TM) Rules – 2016 to the undersigned within 7 days.

Thanking you,

For and on behalf of GPCB

D.M. Thaker
11/6/2020

(D. M. Thaker)
Environment Engineer
Unit Head, Hazardous Waste Cell



501, Fifth Floor, Mansarovar Avenue, Opp. Tulsishyam Flats, Bhimjipura, Nava Vadaj, Ahmedabad-380013. Gujarat. INDIA
M. : 7283889988 Email : ecocare@ecocareinfra.com Website : www.ecocareinfra.com

Date : 02-10-2020

To,

Chariman

Naroda Enviro Projects Limited

Ahmedabad.

Sub : Monsoon Closure

Dear Sir,

As per the Monsoon Guidelines of GPCB, TSDF site was closed during the monsoon period.

As per Monsoon guidelines, our TSDF Site was closed from 26-05-2020 and it's will be expected to re-open on 20-10-2020.

We will start the waste collection in our storage shed on 05-10-2020 for members which is required emergency situation.

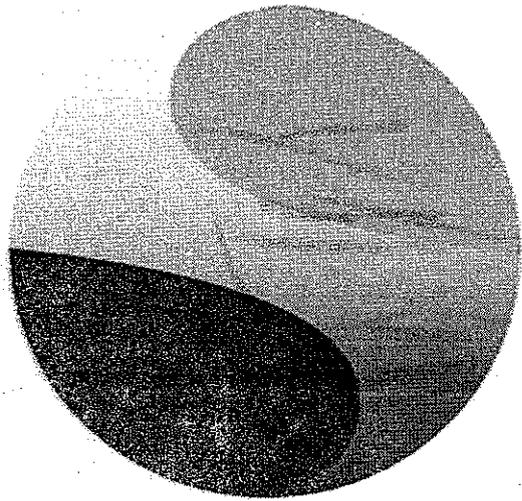
Thanking You,

FOR, ECOCARE INFRASTRUCTURES PVT LTD

Manoj P Patel

(MANAGING DIRECTOR)

ANNEXURE R-44



BPC
BioPetroClean

FENTON Add-on At NEPL CETP
Two phase proposal

Project Objective

FURTHER Improve quality output to COD < 250 PPM

Treat complete chemical stream of 100 – 150 m³/hour

Maintain OPEX within the Budget defined

Provide Consistent Process with 100% Compliance

Conceptual Proposal - Highlights

BPC will perform a Turnkey project – All Included

Project delivered in two phases:

- 1. Phase 1 – implement a system with 25-30 m³/hour**
- 2. Phase 2 – Complete full flow implementation**

SOW:

- Engineering design**
- Project management**
- All equipment delivery & installation**
- Subcontractor's for constructions, tanks, Piping & Electricity**
- Commissioning**

Phase 1 - details

In first phase BPC will deliver a solution for partial flow of 25-30 m³/hour

First phase deliverables will include:

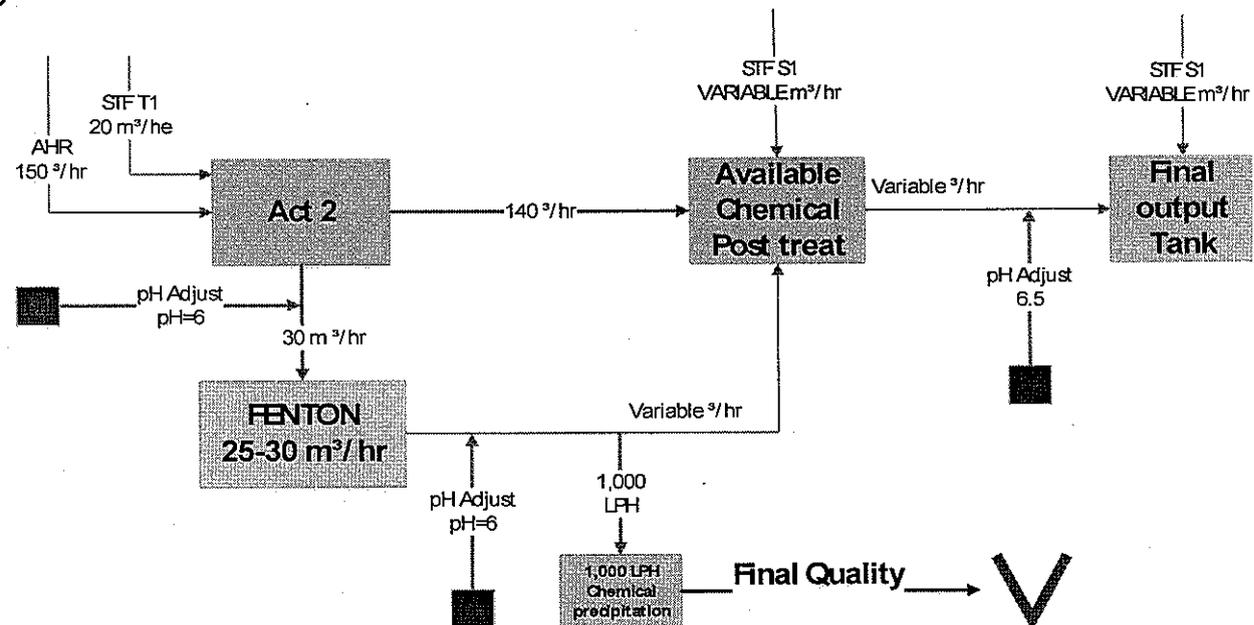
- **Complete engineering design & Project management**
- **Perform infrastructure construction - partial flow 25-30 m³/hour**
- **Deliver & Install all necessary equipment**
- **Perform commissioning and demonstrate the quality**
- **Run the system with partial flow for a month or two and during this time seek OPEX Optimizations**
- **Perform design modification as applicable (after first phase)**

Phase 1 - details

First phase flow process - Refer to the illustration below:

1. Feed Fenton with 25-30 m³/hour partial stream from ACT 2
2. Split Fenton output stream: 1000 LPH will go to a temporary Chemical Precipitation while the rest of the stream will go to existing Flesh mixer
3. Dilution with S1 & Chemical dosing - will be adjusted to optimize OPEX
4. Demo the quality
5. Demo all process
6. Fine-tune the design

FENTOM Implementation - First Phase settings



Phase 2 – details

**In second phase BPC will deliver a solution for full flow
Including:**

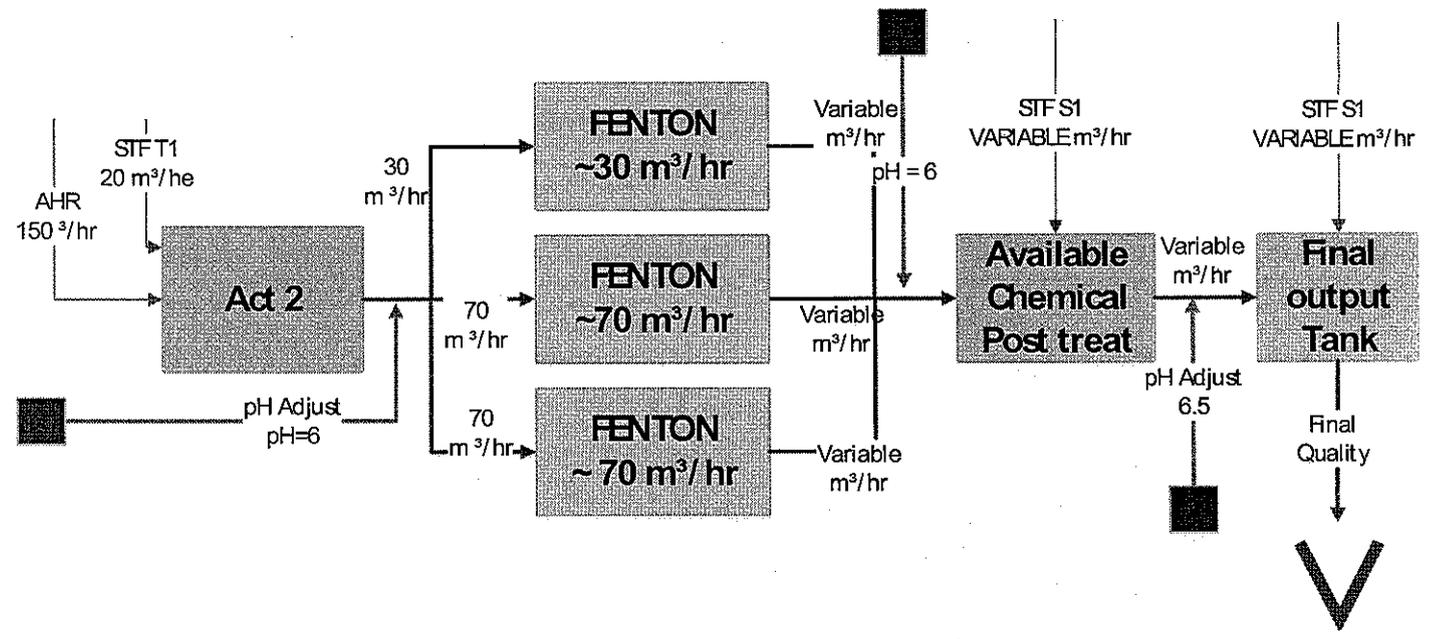
- **Complete Project management**
- **Perform infrastructure construction – for complete flow**
- **Deliver & Install all necessary equipment**
- **Perform commissioning and demonstrate the quality**
- **Commissioning**

Phase 2 - details

Second phase flow process - Refer to the illustration below:

1. All ACT 2 flow will split among three Fenton reactors (see illustration) – this setup allows processing flexible flow with complete automations
2. Fenton output go to Flesh mixer (we may need an extra clarifier parallel to S2)
3. Complete control automation
4. Demo full capacity performance (Sustainable Quality, productivity & OPEX)

FENTOM Implementation - Second Phase settings



Project deliverables

This proposal is for a “Turnkey Project” including

- **Project Engineering Design & Management**
- **All infrastructure delivery & constructions (Tanks, Piping & Elec)**
- **Equipment:**
 - ✓ Control panel with analytical instrumentation for complete automation
 - ✓ Piping & Piping equipment
 - ✓ Automatic Valves, Flow trx, transfer Pumps, Dosing Pumps, Blowers, Chemical storage tanks etc.
 - ✓ Sludge dewatering (we expect sludge increase by 30%)

NEPL shall provide the three phase power that shall be defined.

Price Proposal

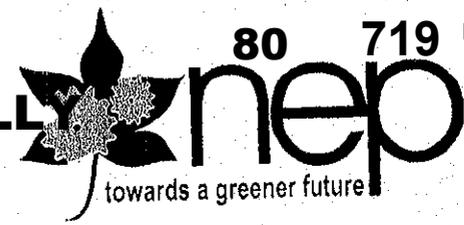
TOTAL Project as turnkey – proposed at 8 CR

First Part price for each phase INR			
Cost Item	Total Project price	Phase 1 Price	Phase 2 Price
TOTAL PRICE	78,000,000	27,500,000	50,500,000
Engineering Design	8,000,000	5,000,000	3,000,000
Project Management	7,500,000	2,500,000	5,000,000
Reactor Tanks + Clarifier	19,000,000	5,000,000	14,000,000
Piping	6,000,000	2,500,000	3,500,000
Equipment + Installation	24,000,000	7,000,000	17,000,000
Electrical Constructions	4,500,000	2,000,000	2,500,000
Integrations & Commissioning	6,000,000	2,000,000	4,000,000
miscellaneous / unexpected	3,000,000	1,500,000	1,500,000

Project Delivery Schedule

- **Start Upon getting complete PO from NEPL**
- **First phase completion within 4 months**
- **One or two months Commissioning & Fine tuning**
- **Start Phase 2 – 5-6 months from PO**
- **Complete Phase 2 within 3 months**
- **Project complete delivery time 8 Months**

ANNEXURE R-5 (COLLY)COLLY



CIN : U29199GJ1995NPL02791

29th May, 2019

To
Shri R R Panchal
Law Officer
GPCB
Gandhinagar.

Rx
29/05/19
General Pollution Control Board
Sector No. 19 A,
Gandhinagar - 382 010

Sir,

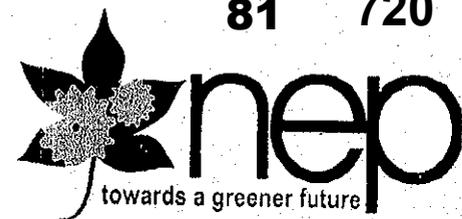
This has ref. to your notice No. GPCB/ABD/ND/CCA-68(9)/ID 12718/507035 dtd. 17.5.19, as downloaded from XGN site and, not received by this office by post, as on date and, served to all the Board of Directors of the Company.

In this connection, prima facie it seems that, the notice has been issued without considering our Upgradation Project undertaken with BPC, Israel with their proven technology, as accepted at US, Africa and Israel with performance guarantee at a cost of nearly Rs. 15 crores, from our own funds, without waiting for Govt. Subsidy. with the consent and approval of GPCB and time bound progress reports thereof alongwith photographs, submitted to GPCB office from time to time.

Inter alia, our other correspondence with GPCB and abreast to GPCB officials at the time of their visit to the CETP during Inspection, kindly refer latest communication dtd. 9th March, 2019 wherein; we have stated that, Retrofitting work of CETP has been completed and, the working will be stabilized by end of May, 2019.

As massive and complete Retrofitting of CETP is undertaken under the technical know-how as supplied by BPC, Israel including import of services, lots of civil work- piping- cabling- electrification- fabrication – collaboration with various agencies etc. etc. at national and international level, the actual implementation and its working is bound to vary than

NARODA ENVIRO PROJECTS L



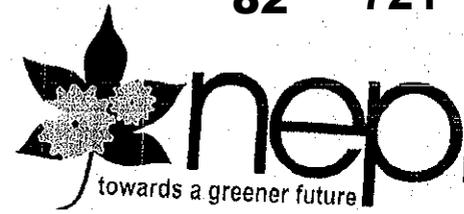
committed. However, we are successful to complete the same by end of March, 2019 and, hopeful that, within 60-90 days thereof after stabilization, the results will be nearer to Norms and, on its full fledge commission we will invite GPCB to witness our efforts and commitment, which is possible due to kind sanction of Chairman Dr. Shri Rajivkumar Gupta.

Further, and O & M Contract has also been awarded to BPC, Israel for a period of 5 years from stabilization of Retrofitting Project, to assure that, quality of performance is continued and maintained.

In preset of above, you are requested not to consider results of samples dtd. 25.2.19 and 28.3.19, as Retrofitting of CETP work was under progress during the relevant period of time and, as number of Units of CETP are under maintenance/ upgradation/ renovation, the treatability of effluent is bound to be affected.

Further, its our submission time and again that, at the time of drawing samples by GPCB, the parallel sample in sealed and signed manner should be given to CETP, too to confirm the same and, any ambiguity in testing results, duration of sample hold, or methods can be sorted out, if any, in interest of principles of natural justice as often it has been observed that, GPCB's results are contradicting with our in house Lab so in such cases, joint testing can be carried out.

Looking to our efforts and thrive to meet the Norms based on above submission, we request that, the requirement of Bank Guarantee should not be pressed. Further, we are a Section 8 Company under the Companies Act and, the Board is working on honaray basis.



CIN : LI29199GJ1995NPL027917

We are very much committed to Environmental Laws, judicial authorities as well as our Corporate Social Responsibility since inception, which is evidenced by various local, national and international accolades as also we have never use potable water to achieve the Norms, which is the case for other law abidance showing CETPs.

Sincerely,

For and on behalf of the Company and Board of Directors

Shailsh Patwari

Shailsh Patwari
Chairman

c.c. : Shri Mistry, MS, GPCB
Shri T B Shah, RO, GPCB

(M)
30/05/19
GUJARAT POLLUTION CONTROL BOARD
Ahmedabad (East)

M
29/05/19
Gujarat Pollution Control Board
Sector No. 10 A,
Bambhingar - 382 010

Naroda Enviro Projects Ltd. NEPL <nep10@hotmail.com>

Wed 8/14/2019 13:41

To: Nareshkumar3 M Tabhani(GoG-GPCB Dept.) <uh-gpcb-sura@gujarat.gov.in>

Cc: Rajesh Parmar <rajeshgpcb@gmail.com>

Dear Shri Tabhani,

This has ref. to sample results of samples drawn on 30.7.19 of final outlet of our CETP showing COD values : 723 mg/l and, BOD : 99 mg/l.

In this connection, we would like to state that, the COD values of the counter sample taken by us is having : 449 mg/l.

Under the case, we request you to give instructions to your field staff, to give us parallel sample, so that, same can be verified and, any probable issues can be avoided.

Your field staff urging for instructions from your office to give parallel sample, so pl. do the needful.

Further, when BoD is : 99 mg/l, COD normally should be average 4-5 times high, which matches with our inhouse lab result of COD 449 mg/l.

So pl. look into as, since last about 3 months our results have not exceeded : 500 mg/l as, retrofitting has been undertaken by BPC, Israel and we are trying for COD : 300 mg/l, and, in such case, this reports affect our sincere and dedicate efforts to meet the Norms and, it may be catching for NGT/ NGOs.

Sincerely,

Shailesh Patwari
Chairman
Naroda Enviro Projects Ltd.
GIDC, Naroda

Guidelines for Online continuous monitoring system for Effluents



**CENTRAL POLLUTION CONTROL BOARD
PARIVESH BHAWAN, EAST ARJUN NAGAR
DELHI – 110 032**

07.11.2014

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1.0 BACKGROUND

Central Pollution Control Board vide its letter No. B-29016/04/06PCI-1/5401 dated 05.02.2014 issued directions under section 18(1)b of the Water and Air Acts to the State Pollution Control Boards and Pollution Control Committees for directing the 17 categories of highly polluting industries such as Pulp & Paper, Distillery, Sugar, Tanneries, Power Plants, Cement, Oil Refineries, Fertilizer, Chloral Alkali Plants, Dye & Dye Intermediate Units, Pesticides and Pharma Sector, Common Effluent Treatment Plants (CETP) and STPs, Common Bio Medical Waste and Common Hazardous Waste Incinerators for installation of online effluent quality and common emission monitoring systems to help track the discharges of pollutants from these units.

Directions were also issued to 11 Ganga Basin State Pollution Control Boards/Pollution Control Committees vide letter No.B-190019/NGRBA/CPCB/2011-12 dated 05.02.2014 for directing the industries discharging effluents directly into River Ganga or its tributaries for installation of real time water quality monitoring systems to monitor parameters such as pH, TSS, COD, BOD, Chromium, Arsenic, AOX, Ammonia. The directions envisage:

- Installation of online effluent quality monitoring system at the outlet of the identified units for the measurement of the parameters, pH, COD, BOD and other sector specific parameters (Annexure-I) as per the guidelines provided, not later than by March 31, 2015 and transmission of online data so generated to SPCB/PCC and CPCB as well.
- Installation of surveillance system with industrial grade IP (Internet Protocol) cameras having PAN, Tilt Zoom (PTZ) with leased line real time connection for data streaming and transmission of the same.
- Ensure regular maintenance and operation of the online system with tamper proof mechanism having facilities for online calibration.

2.0 GENESIS OF PROBLEM :

Chemicals (Pharmaceuticals, Organic/Inorganic, Fertilizers, Oil Refineries and Pesticides), Distilleries, Sugar, Pulp & Paper, Textile, Dying, Bleaching, Slaughter Houses, Tannery, Food & Dairy and other categories of industries located in states of Uttarakhand, Uttar Pradesh, Bihar and West Bengal have been discharging effluent directly or indirectly into the river Ganga and its tributaries (Ramganga & Kali-East) through drains, thereby causing deterioration of water quality of river Ganga and its tributaries.

The SPCBs and PCCs have prescribed standards for various pollutants emitted/ discharged by the industries as notified under the Environment(Protection) Act,1986. The compliance monitoring needs to be strengthened to ensure that treated industrial effluent complying with the stipulated norms is only discharged by the industries.

With rapid industrialisation, it is becoming a need and necessity to regulate and minimise inspection of industries on routine basis. Therefore, efforts need to be made to bring self-discipline in the industries to exercise self-monitoring & compliance and transmit data of effluent and emission to SPCBs/PCCs and to CPCB on continuous basis.

For strengthening the monitoring and compliance through self-regulatory mechanism, online emission and effluent monitoring systems need to be installed and operated by the developers and the industries on, 'Polluter Pays Principle'.

The ground truthing of the values indicated by the online devices need to be done. For proper interpretation of data measures need to be taken at the level of SPCBs/PCCs. For regulatory purposes and for purpose of actions to be taken against non-complying industries/facilities, the existing method of sampling, analysis and related procedures under the existing statutes need to be continued.

Various technologies are available for monitoring the effluent quality in terms of the parameters specified in the directions issued by CPCB. However, no guidelines on selection of the Real Time Monitoring Systems are available.

3.0 REAL TIME MONITORING

In recent years online water quality monitoring technology has received attention and interest in context of providing accurate and continuous water/waste water quality information. There are already commercially available systems for monitoring parameters such as Turbidity, Colour, Fluoride, Sodium, Ammonia, Chlorides, Nitrates etc.

3.1 Merits of on-line Monitoring Techniques

The major advantages of on-line monitoring systems over traditional laboratory based and portable field methods are:

- a. Online monitoring systems provide continuous measurement of data for long periods of time, at the monitoring site of interest, without skilled staff being required to perform the analysis.
- b. All the major steps in traditional analysis like sample collection, preservation, transportation, sample pre-treatment, calibration, reagent addition and sample analysis procedures are usually automated in on-line analysers.
- c. In case of sudden disturbance in the system, compared to conventional methods the on-line analysers provide timely information for taking immediate corrective/preventive steps.

3.2 Basic requirement of an efficient on line analyser

The major prerequisites of efficient online analysers are:

- Should be capable of operating unattended over prolonged period of time.
- Should produce analytically valid results with precision and repeatability
- The instrument/analyser should be robust and rugged, for optimal operation under extreme environmental conditions, while maintaining its calibrated status.
- The analyser should have inbuilt features for automatic water matrix change adaption.
- The instrument / analyser should have onboard library of calibration spectras for different industrial matrices with provision of accumulating further calibration matrices
- Should have data validation facility with features to transmit raw and validated data to central server.
- Should have Remote system access from central server provisioning log file access.
- Should have provision for Multi-server data transmission from each station without intermediate PC or plant server.
- Should have provision to send system alarm to central server in case any changes made in configuration or calibration.
- Should have provision to record all operation information in log file.
- For each parameter there should be provision for independent analysis, validation, calibration & data transmission.
- Must have provision of a system memory (non-volatile) to record data for at-least one

- year of continuous operation.
- Should have provision of Plant level data viewing and retrieval with selection of ethernet, wireless, Modbus & USB.
 - In case of TOC analyser, the empirical relationship between TOC to COD or BOD must be authenticated for all industrial applications and the correlation calculation (for factor) provided.
 - The correlation/interpretation factor for estimating COD and BOD using UV-Visible Absorption Technique shall be regularly authenticated/ validated and details provided.
 - Record of calibration and validation should be available on real time basis on central server from each location/parameter.
 - Record of online diagnostic features including sensor status should be available in database for user friendly maintenance.
 - Expandable program to calculate parameter load daily, weekly or monthly basis for future evaluation with flow rate signal input.
 - Must have low operation and maintenance requirements with low chemical consumption and recurring cost of consumables and spares.

3.3 Techniques/ Instrumentation for online measurement

Real time continuous measurements can be made by two methods:

- Online
- Inline or In situ

3.3.1 Online Analysers

In most cases online measurements are based on automated laboratory based measurement techniques. The sample is usually injected using rotation valves or peristaltic pumps to the instrument using flow injection analyses (FIA) or sequential flow injection techniques (SFI), via a separate analytical line which is connected to the main process stream. The sample is then extracted, pre-treated if required and presented to the analytical instruments for the analysis required. This system can be either calibrated online automatically, or offline by skilled operator. Online analysers usually require a suitable temperature and pressure, fixed background measurement conditions and frequent calibration to obtain analytically valid results.

3.3.2 In line Analysers

Inline analysers are simpler in design and can measure directly in the process line, using a probe that is chemically insensitive. However they are more susceptible to physical and chemical interference from the sample matrix as measurement backgrounds are more changeable and they usually require ex-situ calibration.

Despite their ability to acquire continuous real time data, their widespread application has been limited due to the inability to reliably obtain accurate, cost effective water quality data.

3.4 Photometric optical sensor

Photometric optical sensors are among the most commonly used measurement principles for online analysers. These methods are based on measuring the interaction of light with the sample and the measurement principle is usually based on Beer – Lambert Law which states about a linear relationship between absorbance and concentration of absorbing species. According to the law:

$$\text{Absorbance } A = -\log (I/I_0) = \epsilon * C * L$$

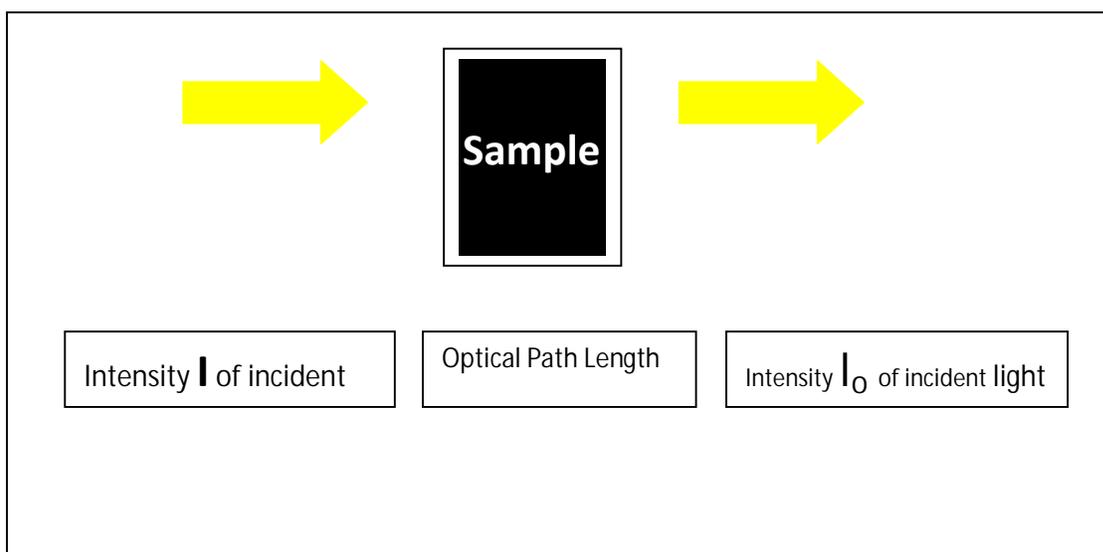
I = Intensity of incident light

I₀ = Intensity of transmitted light

ε = Molar absorbtivity (L/mol/cm)

C = Concentration of solution (mol/l)

L = Optical path length (cm)



They are often employed for their simplicity and rapid response. The majority of commercially available photometric sensors fall into main three categories.

1. Colorimetric
2. UV Absorption and
3. UV Visible absorption

Optical sensors, such as non-destructive sensors arrays, have advantage over ISE (ion selective electrodes) for water quality monitoring as in these analysers gross fouling and potential problems or contamination can be detected by colour changes in the sample.

3.5 Ion Selective Electrodes (ISE)

ISEs are commonly employed as online sensors due to their speed and simplicity as well as low maintenance and purchase cost. With careful use, frequent calibration ideal measurement conditions being maintained, they can achieve higher accuracy and precision. Hence, in theory the configuration and embodiment of an ISE makes it an ideal sensing probe for on-site, real time monitoring applications.

Data obtained from online ISE measurements, although continuous, is usually semi-quantitative in nature. This is because the analytical signal of the ISE is known to be affected by matrix interferences, drift, contamination (e.g. by organic molecules), non-linear responses at the lower end of the detection, temperature in the non ideal measurement conditions. These factors in turn cause measurements errors. To improve its reliability, especially in the field, an ISE must be regularly calibrated with standards and samples should be analysed according to prescribed measurement conditions. However, the economic costs associated with calibration especially for instruments that require ex-situ calibration with skilled personnel, have greatly limited its adoption.

3.6 Colorimetric

These are largely based on direct adaptation of APHA standard methods, which use reagents to obtain desired complex ion formation to quantify the concentration at a specific wavelength. They require regular calibration with standard reagents using Beer's Law to maintain their calibrated online status.

3.7 UV Absorption

The measurement principle is based on specific absorption at a specified wavelength in the UV range. They require conventional calibration according to Beer's Law and standard reagents. The major application includes determination of parameters like DO and Turbidity.

3.7.1 UV Vis Absorption Spectroscopy

This spectrophotometer records light attenuation in the wavelength region between 200 and 750 nm. The measurement is performed in-situ, without sampling or sample pre-treatment, thus preventing errors due to sampling, sample transport and storage etc. A measurement cycle takes between 20 and 60 seconds, making possible a high measuring frequency and detection of rapid changes. In order to combine this high measurement frequency with high accuracy and sensitivity, the instrument is equipped with a Xenon flash lamp as a light source and a concave holographic grating matched with a 256 pixel diode array as detector. For long-term stability of the signal produced, a split light-beam design is used; one beam passes through the sample while the other travels along a parallel pathway inside the instrument and thus acts as an internal reference beam. This second beam is used to cancel

out fluctuations and interferences. These instruments are available for wide range of applications, from ultra pure water (dissolved organics in the $\mu\text{g}/\text{lt}$ range) up to concentrated wastewaters (organics and non-dissolved materials in tens of grams /lt range).

The spectra, referred to as fingerprints obtained with such on-line spectrometers are used for the characterization of the sampled water. The fingerprints are used to monitor changes in the water composition through analysis of the general shape of the spectrum or absorption at a specific wavelength. Furthermore, they are also used to derive more specific parameters, such as turbidity, TSS, Color, nitrate, concentration and sum parameters such as COD (chemical oxygen demand), BOD (biochemical oxygen demand) & TOC (total organic carbon) and (dissolved organic carbon) DOC in water analysis.

Turbidity, due to suspended substances, causes light scattering and shading, thus influencing the absorption over the entire fingerprint. This is an important factor that influences in situ measurements and requires compensation in order to obtain reliable and reproducible readings. Furthermore, it is also used to estimate the concentration of single (groups of) substances, such as benzene, phenol, xylene and toluene. The wavelengths used for determining all these parameters have been selected using various analysis. The use of such multi-wavelength algorithms allows higher specificity than can be achieved with conventional single, dual wavelength, Eight wavelengths etc. in UV range photometry.

The methods usually employ patterns recognition techniques (PRT) to quantify the absorption profile and convert it to an equivalent concentration for the particular water quality parameter of interest. Usually these methods do not require sample pre treatment or daily calibration at the monitoring site of interest. They are employed mainly because samples can be analysed with very little or no sample preparation, no chemicals are required, and they have low operational costs. Such methods have been developed for monitoring Chemical Oxygen Demand (COD), Total Organic Carbos (TOC), Biochemical Oxygen Demand (BOD) and Nitrate.

3.8 Total Organic Carbon (TOC) Methodology

The organic carbon in water and wastewater is composed of a variety of organic compounds in various oxidation states. Some of these carbon compounds can be oxidized further by biological or chemical processes, and the biochemical oxygen demand (BOD) and chemical oxygen demand (COD) may be used to characterise these fractions. The presence of organic carbon that does not respond to either the BOD or COD test makes them unsuitable for the measurement of total organic carbon. Total organic carbon (TOC) is a more convenient and direct expression of total organic content than either BOD or COD, but does not provide the same kind of information. If a repeatable empirical relationship is established between TOC and BOD or COD, then TOC can be used to estimate the accompanying BOD or COD. This relationship must be established independently for each set of matrix conditions, such as various points in a treatment process. Unlike BOD or COD, TOC is independent of the oxidation state of the organic matter and does not measure other organically bound elements, such as nitrogen and hydrogen, and inorganics that can contribute to the oxygen demand measured by BOD and COD. TOC measurement does not replace BOD and COD testing.

3.8.1 TOC Analyser Configuration

Conductivity and Non dispersive infrared (NDIR) are the two common detection methods used in modern TOC analysers.

3.8.2 Conductivity based TOC analysers

Direct conductivity provides an all encompassing approach of measuring CO₂. This detection method uses no carrier gas, is good at the parts per billion (ppb) ranges, but has a very limited analytical range.

Membrane conductivity relies upon the filtering of the CO₂ prior to measuring it with a conductivity cell. Both methods analyse sample conductivity before and after oxidization, attributing this differential measurement to the TOC of the sample.

Conductivity analysis assumes that only CO₂ is present within the solution. As long as this holds true, then the TOC calculation by this differential measurement is valid.

3.8.3 Non Dispersive Infrared (NDIR) TOC Analysers

The principal advantage of using NDIR is that it directly and specifically measures the CO₂ generated by oxidation of the organic carbon in the oxidation reactor, rather than relying on a measurement of a secondary, corrected effect, such as used in conductivity measurements.

Merits

- The low temperature techniques have the advantage of allowing a large volume of sample to be analysed thereby improving the low limit of detection.
- Also the blank value is very low as long as the reagents are pure, which makes the analysis more accurate

Limitations

- Usually the particulates are more difficult to oxidise by nature or organics escape exposure to the reagents by being within the interstitial spaces of the particles.
- High molecular weight compounds such as proteins may be slow to oxidise with the low temperature techniques.

3.8.4 Combustion Technique

The combustion technique uses heat at 680°C or higher temperature in a stream of air, oxygen or nitrogen and usually in presence of a catalyst. Dissolved organics and particulate organics are expected to oxidise fully to carbon dioxide under these conditions. The catalysts vary from cupric oxide, cobalt oxide or platinum on an alumina support.

Analysis range

The range of TOC measurement varies with oxidation method and detection technique. A combustion/TOD method may measure upto 100% carbon in a sample, whereas the NDIR and conductivity detectors vary in range from as low as 0.5ppb to 25,000 ppm.

3.9 Limitations of On-Line Analysers

In spite of the inherent advantages of on-line sensors/monitors, their wide application is still limited due to the following reasons :

- On-line monitoring suffers from more problems than laboratory-based methods because to date, the majority of on-line monitoring technologies developed are direct adaptations of traditional, laboratory-based analytical methods which were not originally designed for field applications. Instead they are required to operate in extreme and variable measurement environments. Consequently, these methods require frequent calibration and maintenance.
 - In addition the analysers are often influenced from cross responses due to matrix variations between the standards and samples analysed, as the measurement conditions are not controlled.
 - Changes in sample matrix affect on-line analysers making it difficult to obtain continuous, reliable measurement in the field.
 - There are also significant economic and logistic costs associated with maintaining remote equipment, as it is difficult for operators to detect problems such as sensor fouling.
 - The problems associated with conventional on-line analysers are due to the fact that univariate linear calibration models derived from Gauss's theory of least squares are employed to determine unknown concentrations. Therefore, the samples and standards must be measured with equal care, under the same measurement conditions, to obtain reproducible and accurate results. Since such consistent measurement conditions are rarely present in the field this affects the operating conditions required for reliable performance and causes a high degree of unreliability in the results from online instrumentation.
 - Due to this reason the users/regulatory authorities need to frequently validate their online results with laboratory based methods.
 - The cost associated with maintenance of these conventional instruments has also greatly limited their wide spread application.
- NOTE : The industry must take full preview of available technologies while product selection and above referred limitations have to be curtailed.

3.10 System available

The pH is monitored using electrochemical sensors. High Turbidity interferes in pH measurements besides the values are also impacted by variation in temperature.

The total suspended solids in the effluent are measured using various techniques including scattered light method, UV visible absorption, comparative techniques like Nephelometric, etc.

The standards for industrial discharges as notified in the EP(Act) 1986 and the water Act 1974 specify BOD and COD as the controlling parameter besides other specific parameters. Limited instrumentation for direct monitoring of these parameters i.e. BOD & COD on real time basis is available. The methods available require intensive infrastructure, besides using chemicals in the process which are released/discharged and can be a likely source of pollution. Besides the measurement is in batches, as it may take upto 02 hours to analyze one sample depending upon the concentration.

These are indirect methods available for estimating BOD & COD. The 02 methods most commonly used for estimating BOD & COD in water and waste water samples are:

- 1) Deriving from TOC values and
- 2) Using UV Absorption spectrophotometry

In India TOC is not specified as a control parameter to industries or CETPs/STPs, therefore the values of BOD & COD has to be interpolated from TOC values.

In the first method TOC is measured and based on the laboratory validation as regards to the observed ratio of TOC:BOD & TOC:COD a correlation factor is established. The method of TOC measurement is approved. In the field TOC is monitored online using any of the approved principles i.e. persulfate or heated persulfate oxidation method, high temperature combustion method and assessment made through NDIR technique. Based on repeatable empirical relationship established between TOC, BOD or COD for a specific waste water source accompanying BOD or COD can be estimated from the recorded TOC values. This relationship between TOC:BOD & TOC:COD must be established for each set of matrix condition. Any change in waste water matrix impacts correlation between these pollutants and hence necessitates regular validation of the relationship between these pollutants.

Considering the need of skilled manpower, the requirement of gases and other peripheral requirements beside high O&M cost for operating TOC Analysers, need of an alternative method was felt.

The other method developed and deployed as a surrogate method is based on UV-Visible Spectrophotometry. This UV-Vis spectral absorbance technology has been found to be less labour intensive in comparison. The trade offs in the ability to compensate for the various interferences should be taken into consideration. Some Instrument Suppliers have incorporated features in their system to compensate for the interferences to improve their data quality.

Some of the systems based on UV-Vis spectrophotometry use a single wavelength (i.e 254nm) or few wavelength bands to estimate COD/BOD values. These system have measurement limitations.. The method is suitable for fairly stable water matrix. Turbidity interferes in the measurements of COD and BOD. The measure is an indirect method as absorbance at specified wavelength is measured and correlated with COD & BOD.

Some other systems based on UV Visible Spectrometry use the full spectrum involving measurement of organics over the entire spectrum starting from 200 nm to 750 nm with adaptive ranging capabilities. The system takes care of single bond organics also. Any change in matrix needs recalibration of the system to assess the factor for determination of COD & BOD. Preferred tools such as multi-wavelength dual beam scanning in UV-Visible range with library of industrial matrices in analyser with multi-point local adaptive calibrations help to have matrix change adaption seems better for analyser. The measured values are determined from the spectral data. The calculation is based on methods and characteristics that were achieved from a multitude of measurement and long time analysis and the observation from UV spectra. Thus, correlations vary with the change in waste matrix and these characteristics need to be frequently established in the beginning for better data quality vis-à-vis the actual values monitoring using laboratory technique. Any change in the waste matrix requires revalidation of the characteristics.

Some manufacturers have developed COD Analyser working on the same principle as the Laboratory technique for monitoring of COD. Many other technologies using direct/indirect methods have been introduced for monitoring of BOD & COD.

Based on the discussion held with the instrument manufacturers/their Indian counterparts and the information available in CPCB, list of various technologies available for monitoring of the pollutants as specified in the directions given by CPCB under Section 18(1) (b) of the Water & Air Acts has been compiled and detailed in the table below:

TABLE-1: TECHNOLOGIES AVAILABLE

Available Technologies	Parameters Measured	Applications
UV Spectrophotometry (Single/two/four wavelengths)	COD, BOD	Fresh Water & Waste Water analysis with constant matrix in water source
UV-Vis Spectrophotometry 40 wavelength	COD, BOD, TSS	Fresh Water & Waste Water analysis with Constant matrix in water source
UV-Visible Spectrophotometry (Single Beam)	COD, BOD, TSS	Fresh Water & Waste Water analysis without interference check and compensation
UV-Vis Spectrophotometry (Double beam with entire spectrum scanning)	COD, BOD, TSS	Fresh water to Waste water analysis Interference check for color and turbidity and compensation.
Combines Combustion Catalytic Oxidation at 680°C and NDIR Method	TOC (Co-relation with BOD & COD)	Fresh Water and Waste Water analysis
UV Persulfate NDIR Detector	TOC (Co-relation with BOD & COD)	Fresh Water & Waste Water analysis
Persulfate Oxidation at 116-130degC NDIR Detector	TOC (Co-relation with BOD & COD)	Fresh Water & Waste Water analysis
Measuring COD using Potassium dichromate($K_2Cr_2O_7$) + Calorimetric	COD	Fresh Water & Waste Water analysis
Electrode /Electrochemical method	pH	Fresh water & Waste Water analysis
Scattered Light Method (IR)	TSS	Fresh water & Waste Water analysis
Nephelometry Method	TSS	Fresh Water & Less turbid water analysis
Colorimetric (645-655nm)	NH3	Process stream & Waste Water analysis. Turbidity interference is there which can be overcome
Ion Selective Electrode method With temp correction	NH3	Process stream & Waste Water analysis. Turbidity interference is there which can be overcome.
UV Absorbance or Multiple Wavelength UV Absorbance Spectrophotometers (200-450nm)	NH3	Process stream & Waste Water analysis. Turbidity interference is there which can be overcome.
Colorimetric method Reaction of Cr-VI with diphenyl carbazide in acid solution	Chromium	Fresh Water & Waste Water analysis.

Voltammetry (Anodic Stripping Voltammetry)	Chromium	Fresh Water analysis.
Dual Beam UV-Visible Spectrophotometry	Chromium Hexavalent and Trivalent	Fresh water & waste water analysis.
Voltammetry (Anodic Stripping Voltammetry)	Arsenic	Fresh Water analysis.

3.11 Assessment of technology

The various Monitoring Technologies presented or informed by the Instrument Manufacturers/their Indian counterpart were recorded and based on the information available efforts made to assess the suitability of the technologies/instrumentations for monitoring the effluent quality in different matrices, keeping into considerations the limitations of the technologies, the varying Indian environmental conditions and also the chemical attributes in the effluent channels of the industries or the water bodies. Issues related to the use of reagents, maintenance required, operating costs, etc., wherever available were also considered. Table 2 compiled based on the information provided by vendors/ Indian counterpart, indicates the suitability of the available technologies/ instrumentation for monitoring different pollutants in varying matrices.

TABLE 2: SUITABILITY OF TECHNOLOGIES FOR DIFFERENT MATRICES

Available Technologies	Parameters Measured	Applications	Limitations
UV Spectrophotometry (Single /two /four wavelengths)	COD, BOD	Fresh Water analysis with constant matrix	Suitable for fresh water and not for waste water analysis. Interference of colour & high turbidity. Suitable for stable matrix. Single bond organic compounds are not measured.
UV-Vis Spectrophotometry 40 wavelength	COD, BOD, TSS	Fresh Water & Waste Water analysis with constant matrix	Many organic compounds are unattended due to lesser scanning of UV spectra. Suitable for stable matrix. Any matrix change would require revalidation of factor. Sample pumping limitation.
UV-Visible Spectrophotometry (Single Beam)	COD, BOD, TSS	Fresh Water & Waste Water analysis.	Interference due to colour & high turbidity affects the analysis. Reference beam compensation not available. Suitable for stable matrix. Any matrix change would require revalidation of factor.

UV-Vis Spectrophotometry (Double beam with entire spectrum scanning)	COD, BOD, TSS	Fresh water to Waste water analysis.	Interference of colour & turbidity is compensated in visible spectrum. Any matrix change would require revalidation of factor.
Combines Combustion Catalytic Oxidation at 680°C and NDIR Method	TOC (Co-relation with BOD & COD)	Fresh Water and Waste Water analysis.	-Carrier gases required -Continuous High power requirement -For Analyser: Infrastructure is required -More than 10-15 minutes sampling frequency. -Only TOC can be measured. -Any matrix change requires fresh correlation to COD & BOD
UV Persulfate NDIR Detector	TOC (Co-relation with BOD & COD)	Fresh Water & Waste Water analysis.	- Carrier gases required - Continuous High power requirement -Analyser: Infrastructure required. -More than 10-15 minutes sampling frequency. -Only TOC can be measured. Any matrix change requires fresh correlation to COD & BOD.
Persulfate Oxidation at 116-130degC NDIR Detector	TOC (Co-relation with BOD & COD)	Fresh Water & Waste Water analysis.	Applicable for moderate polluted effluent. -Carrier gases required -Analyser: Infrastructure required Any matrix change requires fresh correlation to COD & BOD
Measuring COD using Potassium dichromate($K_2Cr_2O_7$) + Calorimetric	COD	Fresh Water & Waste Water analysis.	Discharge of hazardous chemicals.
Electrode /Electrochemical method	pH	Fresh water & Waste Water analysis.	--Electrode life
Scattered Light Method (IR)	TSS	Fresh water & Waste Water analysis.	---
Nephelometry Method	TSS	Fresh Water & Less turbid water	Fresh Water analysis with Low turbidity
Colorimetric (645-655nm)	NH ₃	Fresh Water & Waste Water analysis.	Turbidity interference is there which can be overcome.

			3-15 min cycle time
Ion Selective Electrode method With temp correction	NH ₃	Fresh Water & Waste Water analysis.	Interference from Potassium. Requires additional measurement of potassium for compensation.
UV Absorbance or Multiple Wavelength UV Absorbance Spectrophotometers (200-450nm)	NH ₃	Fresh Water & Waste Water analysis.	Turbidity interference is there which can be overcome.
Colorimetric method Reaction of Cr-VI with diphenyl carbazide in acid solution	Chromium	Fresh Water & Waste Water analysis.	Experience in Indian condition is not available.
Voltammetry (Anodic Stripping Voltammetry)	Chromium	Fresh Water analysis.	Experience in Indian condition is not available
Dual Beam UV-Visible Spectrophotometry	Chromium Hexavalent and Trivalent in full spectrum	Fresh water & waste water analysis.	Experience in Indian condition is not available
Voltammetry (Anodic Stripping Voltammetry)	Arsenic	Fresh Water analysis.	Experience in Indian condition is not available

3.12 Issues with real time monitoring systems

The initial Indian experience of real time monitoring systems has not been very satisfactory. In most of the cases the data obtained is either not reliable or is non-existent, since the systems are neither operated nor maintained properly. The operation of real time system needs dedication and initiation, both from both the Industry as well as the instrument supplier. It has been observed that due priority is not given by the industry to operation of real time monitoring system and at the same time the necessary support from the vendors is also not forthcoming. Effective operation of the real time systems requires appointment of a dedicated person by the industry with responsibility to maintain and operate the system by the Industry and the instrument supplier also considers its responsibility to ensure trouble free operation of the system. It is therefore essential that the responsibility of both the industry as well as the vendor needs to be clearly specified.

4.0 Site selection

For online RT EQMS, the location of the sensors is important and submersible In-situ sensors as preferred option. If site does not permit then system with flow cell or extraction may be opted, even though this would have been expected given the issues with sample conditioning which may affect the measurement accuracy sometimes with a significant degree of variability.

The discharge point from ETP has to be selected to fix the insitu sensors or pump to extract the sample for cabinet system. The insitu installation are preferred where sensor can be fixed directly in the treated effluent channel.

4.1 Quantification

Instrument Calibration: The following frequency has to be used for calibration of analyser

- pH – once every week or as specified by manufacturer whichever is earlier
- COD – once every week or as specified by manufacturer whichever is earlier
- BOD – once every week or as specified by manufacturer whichever is earlier
- TSS – once every week or as specified by manufacturer whichever is earlier
- TOC – once every week or as specified by manufacturer whichever is earlier
- Temperature – once every month or as specified by manufacturer whichever is earlier

The software must keep all calibration data points in memory for interpretation of matrix change adaptation.

4.2 System Validation

Online instrument operation will be evaluated using the known buffers, traceable standards and laboratory techniques. By validating sensors and probes with known standards such as KHP (potassium hydrogen phthalate) for COD & TOC, Formazin equivalent standard for TSS & pH buffers have to be used to calculate a running variance of the measurements. When the variance is outside of the set points, this can be an indication the monitor requires calibration and service.

4.3 Parameter validation

Each parameter is validated with reference to standard laboratory analysis and known standards.

Parameter Accuracy: Allowed Variability

The relative difference between online and laboratory measurements has to be between

- COD Accuracy $\pm 10\%$
- BOD Accuracy $\pm 10\%$.
- pH Accuracy ± 0.2 pH
- TSS Accuracy $\pm 10\%$

4.4 Operation & maintenance

- Daily Check – GPS Transmission, System Diagnostic alarms.
- Monthly Check – Sensors & system cleaning, data backup, Parameter Calibration as specified in calibration schedule.
- Periodic Check – System validation with known standards, Laboratory & Online parameters Comparative.

5.0 Reporting

The RT EQMS suppliers have to provide central server at CPCB and SPCB with latest software to view the data in graphical/ tabular format and also to compare the data features. One minute data average must be transmitted/retrieved to servers every 30 minutes. In the

event of transmission loss the time stamped data in the datalogger memory must be transmitted to fill from the last transmission break with a stamp of time delay. The software should have two way communication, so that data from the system can be seen whenever desired and remote of controller/data logger can be taken to visualize the immediate status of the system.

5.1 Data Management

Considering the heterogeneity of real time monitoring systems industries are required to submit real time data through their respective instrument suppliers. This mechanism has helped in consolidating the data avoiding the complexity of different technologies and availability of monitored data in different data formats and at the same time involving the instrument suppliers in data transferring mechanism. The system enables two way communication required to manage such real time systems.

The basic functional capabilities of such software systems shall include:-

- The system should be capable of collecting data on real time basis without any human intervention.
- The data generation, data pick up, data transmission; data integration at server end should be automatic.
- The submitted data shall be available to the Boards, SPCBs/PCCs and CPCB for immediate corrective action.
- Raw data should be transmitted simultaneously to SPCBs /PCCs and CPCB.
- In case of delay in collection of data due to any reason, the data transmission should be marked delayed data and reports of delayed data should be displayed on the portal
- At no point of time, manual data handling should be permitted. Data validation should be permitted only through the administrator and data changes recorded with date and time stampings.
- Configurations of the systems once set up (through remote procedure) and verified, should not be changed. In case any setting change is required it should be notified and recorded through the authorized representatives only.
- The data submitted electronically shall be available to the data generator through internet, so that corrective action if any required due to submission of erroneous data can be initiated by the industry.
- The software should be capable to verify the data correctness which means at any given point of time the regulatory authorities/data generator should be able to visualize the current data of any location's specific parameter.

- A system for data validation shall be incorporated in the software with two stage/three stage validation and fixed responsibilities of stakeholders as below;
 - a. **Data Generator:**
 - b. **SPCBs/PCCs:**
 - c. **CPCB:**

CPCB will help in data validation till such time, adequate expertise for data validation is developed in the SPCBs/PCCs,)
- Change Request Management: window for requesting data changes due to actual field conditions shall be provided to the industry in line to SPCB to consider the request or not.
- The site surrounding environmental conditions shall also be recorded along with other environmental parameters, as these have the potential to affect the system adversely and corrupt the data generated.
- System should have capability to depict data at the actual location of industry over the map. CPCB and or SPCBs shall develop a map based system for data integration at a single location.
- The software should be capable of analyzing the data with statistical tools and shall have the following capabilities:
 - i) Statistical data analysis (customizable) for average, min., max., diurnal variation.
 - ii) Comparison of parameters of different locations in user selectable time formats i.e. in graphical and tabular formats compatible to MS Excel, MS Word, *.txt etc.
 - iii) Capability of comparison of data with respect to standards/threshold values.
 - iv) Auto report and , auto mail generation etc.
 - v) Providing calibration database for further validation/correction of data.
 - vi) Transmitting data to different locations as per EC,CTE/CTO, and other directives in force.
 - vii) Channel configuration for range, units etc.
 - viii) Providing data in export format on continuous basis through central/station computer system to other system.
- Data transmission through different media like GPS, CDMA, Normal phone line, Datacards, Broadband, 3G etc. (at least any two media supported).
- Data Storage for next five years.
- System should be connected to a backup power source with adequate capacity to avoid any power disruption

Considering the large volume of data required to be collated, compiled, processed and interpreted a software system will be developed in future at CPCB in consultation with all SPCBs/PCCs exploring common data format to collect data from different servers to a common server.

6.0 Available monitoring matrices Sector specific

Considering the technological limitations and issues related to installation, data management and operation of real time systems efforts have been made to prepare a compilation of technologies (Table-3) that can be considered by industries for installation. Table 3.0 also provides approximate cost of installing such systems and communicating data to SPCBs/PCCs & CPCB on real time basis.

TABLE-3: DETAILS OF PARAMETERS AND FEASIBLE TECHNOLOGIES REQUIRED TO BE INSTALLED FOR REAL TIME CONTINUOUS EFFLUENT MONITORING SYSTEMS IN DIFFERENT CATEGORIES OF INDUSTRIES IN INDIA.

Category No.	Category Name	Parameter to be monitored	Available Technologies	Number of Vendors	Approx. Cost in Rs. Lakhs	Remarks
1	Aluminium	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD	
		4. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		5. Flow	1. Magnetic /Ultrasonic	>4	0.75	
2	Cement	Nil	--	--	--	No real time monitoring required for Effluent.
3	Distillery	1. pH	1. Electrode Method	>10	0.75	In case of unit has

		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	achieved ZLD condition 1 & 2 of the notes after the table shall have to be complied.		
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission			
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD			
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD			
		4. TSS	1. Scattered light IR Method	>4	3.00			
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00			
		5. Flow	1. Magnetic /Ultrasonic	>4	0.75			
		4	Dye and dye intermediate	1. pH	1. Electrode Method		>10	0.75
				2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)		>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission
					2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method(TOC)		>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission
3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)			>4	Combined with BOD			
	2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)			>4	Combined with BOD			
4. TSS	1. Scattered light IR Method			>4	3.00			

			3. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		5. Cr	1. Colorimetric method	>3	12.00	Cr – Process Specific Experience in Indian conditions is not available.
			2. UV-Vis Spectroscopy (Entire spectrum scanning)	>4	10.00	
		3. Flow	1. Magnetic /Ultrasonic	>4	0.75	
5	Chlor Alkali	1. pH	1. Electrode method	>10	0.75	
		2. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectrophotometry (Single Wavelength)	>4	3.00	
6	Fertilizers Urea Plant	1. pH	1. Electrode Method	>10	0.75	
		2. Ammonical Nitrogen	1. Ion Selective Electrode method With temp correction	>	3.00	
			UV Vis Spectrophotometers (Entire spectrum scanning)	>4	3.00	
		3. Flow	1. Magnetic /Ultrasonic	>4	0.75	
	Fertilizers (DAP)	1. pH	1. Electrode Method	>10	0.75	
		2. Flow	1. Magnetic /Ultrasonic	>4	0.75	
	Fertilizers	1. pH	1. Electrode Method	>10	0.75	

	(Phosphoric acid & SSP)	2. Fluoride	-	-	-	Fluoride -Since reliable real time monitoring systems are not available, manual monitoring system as practised shall be continued
		3. Flow			0.75	
7	Iron Et steel	1. pH	Electrode method	>10	0.75	Cynide & Phenol -Since reliable real time monitoring systems are not available, manual monitoring system as practised shall be continued
		2. Phenol	-	-	-	
		3. Cynide	-	-	-	
		4. Flow	1. Magnetic /Ultrasonic	>4	0.75	
8	Oil refinery	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD	
		4. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single	>4	3.00	

			wavelength)			
		5. Flow	1. Magnetic /Ultrasonic	>4	0.75	
9	Petro-chemicals	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD	
		4. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		5. Flow	1. Magnetic /Ultrasonic	>4	0.75	
10	Pesticides	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method	>4	Combined with BOD	

			(TOC)			
		4. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		6. Chromium	1. Colorimetric method	>3	12.00	Chromium&Arsenic- Experience in Indian conditions is not available.
			2. UV-Vis Spectroscopy (Entire spectrum scanning)	>4	10.00	
		5. Arsenic	1. Voltammetry	>2	20.00	
		6. Flow	1. Magnetic /Ultrasonic	>4	0.75	
11	Pharmaceu ticals	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD	
		4. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		5. Chromium	2. Colorimetric method	>3	12.00	Chromium&Arsenic- Experience in Indian Conditions is not
			2. UV-Vis Spectroscopy (Entire	>4	10.00	

			spectrum scanning)			available.
		6. Arsenic	1. Voltammetry	>2	20.00	
		7.	1. Magnetic /Ultrasonic	>4	0.75	
12	Power Plants	1. pH	1. Electrode Method	>10	0.75	
		2. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		3. Temperature	1. Electrode Methods	>10	0.75	
13	Pulp & Paper	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD	
		4. AOx	1. UV-Vis Spectrophotometry	>1	20.00	AOx – Process Specific. Some vendors claim that AOx can be monitored on real time basis. But there is no experience in Indian conditions.

		5. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		6. Flow	1. Magnetic /Ultrasonic	>4	0.75	
14	Sugar	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD	
		4. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		5. Flow	1. Magnetic /Ultrasonic	>4	0.75	
15	Tannery	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	

			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD	
		4. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		5. Cr	1. Colorimetric method	>3	12.00	Cr – Process Specific Experience in Indian conditions is not available.
			2. UV-Vis Spectroscopy (Entire spectrum scanning)	>4	10.00	
		6. Flow	1. Magnetic /Ultrasonic	>4	0.75	
16	Zinc	1. pH	1. Electrode Method	>10	0.75	
		2. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		3. Flow			0.75	
17	Copper	1. pH	1. Electrode Method	>10	0.75	
		2. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		3. Flow	1. Magnetic /Ultrasonic	>4	0.75	
18	Textile and Bleaching (GPI)	1. pH	1. Electrode Method	>10	0.75	
		2. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	12.00 (COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method	>4	24.00 (COD)	

			(TOC)		+Controller & DAS & Data Transmission	
		3. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		4. Flow	1. Magnetic /Ultrasonic	>4	0.75	
19	Dairy (GPI)	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD	
		4. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		5. Flow	1. Magnetic /Ultrasonic	>4	0.75	
20	Slaughter House (GPI)	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	

		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD	
		4. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		5. Flow	1. Magnetic /Ultrasonic	>4	0.75	
21	Other Engineering units like Electroplating	1. pH	1. Electrode Method	>10	0.75	
		2. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	12.00 (COD+TSS) +Controller & DAS & Data Transmission	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	24.00 (COD) +Controller & DAS & Data Transmission	
		3. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		Ni	1. Voltametry	>1	20.00	Ni, Cr – Process Specific Experience in Indian conditions is not available.
		Cr	1. Colorimetric method	>3	12.00	
			2. UV-Vis Spectroscopy (Entire spectrum scanning)	>4	10.00	
3. Flow	1. Magnetic /Ultrasonic	>4	0.75			
22	Other units of Soft Drinks and	1. pH	1. Electrode Method	>10	0.75	
		2. BOD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	16.00 (BOD+COD+TSS) +Controller & DAS & Data Transmission	

	Food		2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	28.00 (BOD+COD) +Controller & DAS & Data Transmission	
		3. COD	1. UV-Vis Spectro-photometry (Entire spectrum scanning)	>4	Combined with BOD	
			2. Combined Combustion Catalytic Oxidation at 680°C and NDIR Method (TOC)	>4	Combined with BOD	
		4. TSS	1. Scattered light IR Method	>4	3.00	
			2. UV-Vis Spectro-photometry (Single wavelength)	>4	3.00	
		5. Flow	1. Magnetic /Ultrasonic	>4	0.75	

Notes:-

1. Industries claiming Zero discharge and not discharging effluent outside the premises will have to install Camera and flow meter in the channel / drain provided for carrying the effluent from within the industry premises.
2. For industries achieving Zero Liquid Discharge by utilizing effluent for irrigation/gardening will have to install Real time monitoring systems.
3. In case of parameters specified in Consent to Operate/Environmental Clearance and where real time monitoring technology is not well established, the parameters will be analysed using established laboratory methods atleast once in three months or as per the frequency specified in Consent to Operate/EC whichever is more.
4. The table/matrix will be updated in April, 2015, incorporating any new technology/instrumentation.

7.0 Observations

Online analyzers are a better tool to extend in-time information on compliance of ETP and CETP to the prescribed norms to regulator. The real time measurement for important parameters will give detail information continuously which laboratory instruments fail to give as random once in a month or quarter information is too less to understand discharge compliance.

8.0 Conclusions

1. The industries falling in 17 category of highly polluting industries, the grossly polluting industries discharging directly/indirectly into river Ganga or its tributaries, Common Effluent Treatment Plants (CETP) and Sewage Treatment Plants (STPs), Common Bio Medical waste and Common Hazardous waste incinerators have to install real time effluent quality monitoring system. The installation of the system should be completed by March 31,2015.
2. The parameter i.e. Flow, pH, TSS, COD, BOD, and Ammonia will be monitored by installing Real Time Monitoring Systems. Other parameters specified in the consent to operate/Environmental Clearance will be monitored on quarterly basis using the established laboratory methods.
3. In case of industries having adopted Zero Liquid Discharge (ZLD) the units shall install IP camera with PAN, TILT Zoom, 5x or above focal length, with night vision capability and flow meters in the channel/drain provided for carrying the effluent from within the premises of the unit.
4. The industries meeting ZLD norms by utilizing the treated effluent for irrigation shall install real time monitoring system at the outlet of ETP, to monitor the quality of treated effluent.
5. As the data from real time systems is monitored at very short duration, regular fluctuation will be observed 10% exceedence of values over the prescribed norm shall not be considered for action presently. In case of regular noncompliance by the units the existing method of sampling, analysis and related procedure under the existing norms need to be continued for regulatory purpose and for purpose of actions against the unit.
6. The software will give alarm, in case of the concentration of parameter exceeds the prescribed norms by 10% continuously.
7. The responsibility of data submission lies with the Individual units. The instrument supplier will facilitate data transmission on behalf of industries. Industry will ensure at least 85% data availability from the system installed.
8. The vendors/instrument supplier shall install their server in SPCB/PCCs and CPCB for transferring data from the real time system.
9. CPCB in consultation with SPCBs/PCCs shall explore the possibility to identify a common protocol, so that the data from the real time systems can be transferred directly to the server installed by SPCBs/PCCs and CPCB in a compatible form.
10. The vendor/instrument supplier shall make provisions to provide data continuously at least 04 locations in SPCBs/PCCs, RO/DO of CPCB, and industry directly from the analyzers.
11. In case of system requiring pumping of samples, the instrument supplier/vendors has to ensure that dilution of sample is not possible and in case of any dilution, the system gives alarm.
12. The SPCBs/PCCs will identify a team of officials for plausibility control of data received. The team members will be responsible for validating, interpreting and interpolation of data on daily basis.

13. The vendor /instrument supplier will regularly cross check the data obtained from real time system with that of the samples collected manually and analyzed using approved laboratory techniques and revalidate the factor for interpolation/extrapolation of COD/BOD values essential for generating better quality data. The industry will take responsibility of establishing co-relation factor.
14. The industries shall ensure that the monitoring systems are covered under Comprehensive Maintenance Contract with the vendors/ authorized Indian service partners of the instrument manufacturer for atleast during the next 05 years after the installation.
15. The authorized Indian service partner/instrument manufacturer shall ensure that any problem in monitoring system/data acquisition and transfer system does not persist beyond 72 hours.
16. The vendors/instrument manufacturers shall ensure availability of spare parts for at least 07 years after installation of the system.
17. The industry should take Bank Guaranty (BG) equivalent to 25% of the cost of the Real Time Monitoring Systems from the manufacturer of the system or its authorised Indian counterpart. The BG is taken to ensure optimal performance of the system including 85% data captive rates, providing reliable & accurate data.
18. As nearly all the RTEQMS are manufactured abroad, the Indian Bidder has to provide copy of the authorization from the original instrument manufacturer for bidding on his behalf
19. Role of manufacturers/supplier authorised Indian Service Partner:
 - Supply and install equipment suitable to monitor the effluent quality in the available matrix
 - Supply all the supporting equipment, analysers and software
 - Supply equipment/instruments capable of monitoring/measuring the parameters identified in the range of occurrence in the industrial unit
 - Supplied software should establish two way communication sending diagnostics of instruments on demand, with central servers at SPCBs/PCCs and CPCB
 - The software should be capable of transmitting the data along with diagnostics of the instrument

Note : Efforts have been made to include all available monitoring technologies /instrumentation in the document. In case any technology /instrumentation is not covered or is introduced subsequently the details be forwarded to CPCB, so that the same can be incorporated while reviewing this document after a few months.

Tax Invoice

Next Engineering
211, Satayam Complex,
Opp. JBR Arcade, Science City Road,
Ahmedabad - 380060
E-Mail : info@nextengineering.in

Invoice No.	Dated
2017-18/0017	5-May-2017
Delivery Note	Mode/Terms of Payment
28	100% Advance Against Material
Supplier's Ref.	Other Reference(s)

Buyer
Naroda Enviro Projects Ltd
Plot No-512-515,, Phase-1, Opp-GIDC Post Office,
GIDC Naroda,, Ahmedabad-382330., Co.Person :
Mr.Vijaybhai, Co.No.9543571777
PAN/IT No

Buyer's Order No.	Dated
Verbal	5-May-2017
Despatch Document No.	Delivery Note Date
	5-May-2017
Despatched through	Destination
By Hand	Naroda
Terms of Delivery	
2 Weeks	

Sl No.	Description of Goods	Quantity	Rate	per	Amount
1	Online COD, BOD, TSS & PH Analyzer <i>Data Transfer to CPCB and GPCB</i> 1) DIQ/S 284-CR6 (Multi Controller) 2) Sensolyte®700 IQ/SET (Online PH Sensor) 3) CarboVis 701 IQ TS (Online COD BOD TSS TOC Sensor) 4) ST-2 (Validation Standard) 5) VIS/CS (Cleaning Kit) 6) SASIQ-15,0 (15m Sensor Cable for Carbovis and Sensolyte) 7) Cleaning Air Box-230 VAC (External Air Cleaning)	1 Unit	15,00,000.00	Unit	15,00,000.00
	Output Vat 4%		4 %		60,000.00

continued ...

Tax Invoice(Page 2)

Next Engineering

211, Satayam Complex,
Opp. JBR Arcade, Science City Road,
Ahmedabad - 380060
E-Mail : info@nextengineering.in

Invoice No.
2017-18/0017
Delivery Note
28
Supplier's Ref.

Dated
5-May-2017
Mode/Terms of Payment
100% Advance Against Material
Other Reference(s)

Buyer

Naroda Enviro Projects Ltd
Plot No-512-515,, Phase-1, Opp-GIDC Post Office,,
GIDC Naroda,, Ahmedabad-382330., Co.Person :
Mr. Vijaybhai, Co.No.9543571777
PAN/IT No

Buyer's Order No.
Verbal
Despatch Document No.
Despatched through
By Hand
Terms of Delivery
2 Weeks

Dated
5-May-2017
Delivery Note Date
5-May-2017
Destination
Naroda

Sl No.	Description of Goods	Quantity	Rate	per	Amount
	Add Output Vat 1%			1 %	15,000.00

Total **1 Unit** ₹ **15,75,000.00**

Amount Chargeable (in words)

INR Fifteen Lakh Seventy Five Thousand Only

E. & O.E

Company's PAN : **AAJFN5991N**

Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

Customer's Seal and Signature

for Next Engineering

Authorised Signatory

This is a Computer Generated Invoice



Megha Jani <adv.megha.jani@gmail.com>

Fwd: Online Monitoring Reports

Naroda Enviro <narodaenviro@gmail.com>
To: adv.megha.jani@gmail.com
Cc: * <spatwari.18@gmail.com>

Tue, Oct 6, 2020 at 3:01 PM

----- Forwarded message -----

From: **Jaydeep Gohil** <jaydeep@nextengineering.in>
Date: Fri, Oct 2, 2020 at 4:03 PM
Subject: Online Monitoring Reports
To: <spatwari.18@gmail.com>
Cc: <narodaenviro@gmail.com>, Varun Patel <varun@nextengineering.in>

Dear Sir,

As required from your side , please refer to the attached online COD BOD TSS 7 pH data Report till date.

--

If you have any query please feel free to contact us.

Regards,

Jaydeep Gohil
Sr. Manager - Tech

Nexteng Enviro Private Limited
"Formally known as a Next Engineering"

1203 I Square Corporate Park, At Sukan Mall Cross Road, Science City, Ahmedabad - 380060
Mobile : +91-9033731196 | Office : +91-9998974240.
Mail : jaydeep@nextengineering.in | Web : www.nextengineering.in

3 attachments

 **image001.png**
9K

flourishing environment **image002.png**
8K

 **Parameter Report_02 Oct 2020 09_56.pdf**
13477K

ANNEXURE R-9**121 760**

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
5217	2017-07-09 21:30:00:000	75.99	490.17	73.31	35.85	7.39
5218	2017-07-09 21:45:00:000	70.57	458.92	68.25	35.84	7.31
5219	2017-07-09 22:00:00:000	61.64	424.25	58.78	35.83	7.26
5220	2017-07-09 22:15:00:000	59.45	384.88	57.94	35.83	7.22
5221	2017-07-09 22:30:00:000	57.5	372.83	57.0	35.84	7.2
5222	2017-07-09 22:45:00:000	56.02	363.75	55.13	35.97	7.42
5223	2017-07-09 23:00:00:000	56.02	359.75	54.28	36.06	7.68
5224	2017-07-09 23:15:00:000	57.34	367.75	56.53	36.02	7.68
5225	2017-07-09 23:30:00:000	63.75	403.25	62.44	35.94	7.69
5226	2017-07-09 23:45:00:000	66.04	419.92	65.72	35.9	7.69
5227	2017-07-10 00:00:00:000	65.99	429.5	64.13	35.88	7.69
5228	2017-07-10 00:15:00:000	71.09	452.17	69.75	35.87	7.7
5229	2017-07-10 00:30:00:000	73.12	468.38	72.0	35.85	7.7
5230	2017-07-10 00:45:00:000	74.06	472.58	72.47	35.85	7.71
5231	2017-07-10 01:00:00:000	69.3	462.37	66.52	35.86	7.71
5232	2017-07-10 01:15:00:000	74.01	471.25	72.94	35.85	7.71
5233	2017-07-10 01:30:00:000	74.84	479.83	73.41	35.84	7.72
5234	2017-07-10 01:45:00:000	74.84	481.58	73.41	35.84	7.72
5235	2017-07-10 02:00:00:000	72.6	472.08	70.88	35.86	7.71
5236	2017-07-10 02:15:00:	74.06	474.83	73.41	35.86	7.7

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
5237	2017-07-10 02:30:00:000	74.06	476.5	73.41	35.86	7.7
5238	2017-07-10 02:45:00:000	74.32	477.17	73.41	35.85	7.7
5239	2017-07-10 03:00:00:000	70.36	463.58	67.78	35.86	7.71
5240	2017-07-10 03:15:00:000	73.75	472.08	72.94	35.87	7.71
5241	2017-07-10 03:30:00:000	74.84	478.92	73.41	35.86	7.71
5242	2017-07-10 03:45:00:000	74.84	480.75	73.41	35.86	7.72
5243	2017-07-10 04:00:00:000	70.89	467.17	69.37	35.85	7.72
5244	2017-07-10 04:15:00:000	74.9	477.58	73.97	35.82	7.72
5245	2017-07-10 04:30:00:000	77.45	493.42	75.94	35.73	7.73
5246	2017-07-10 04:45:00:000	82.03	520.33	80.16	35.6	7.75
5247	2017-07-10 05:00:00:000	80.89	526.58	78.66	35.49	7.77
5248	2017-07-10 05:15:00:000	88.28	558.33	85.78	35.43	7.78
5249	2017-07-10 05:30:00:000	90.31	574.67	87.75	35.39	7.78
5250	2017-07-10 05:45:00:000	91.09	581.92	88.87	35.39	7.76
5251	2017-07-10 06:00:00:000	84.9	557.92	82.22	35.4	7.75
5252	2017-07-10 06:15:00:000	87.66	560.58	85.78	35.42	7.73
5253	2017-07-10 06:30:00:000	85.73	550.25	84.84	35.44	7.71
5254	2017-07-10 06:45:00:000	82.92	533.5	81.66	35.44	7.7
5255	2017-07-10 07:00:00:000	78.91	514.42	78.19	35.42	7.69
5256	2017-07-10 07:15:00:	79.11	507.08	78.19	35.42	7.68

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
5257	2017-07-10 07:30:00:000	78.28	502.42	78.09	35.43	7.67
5258	2017-07-10 07:45:00:000	78.28	499.33	77.91	35.44	7.68
5259	2017-07-10 08:00:00:000	76.67	494.33	75.28	35.45	7.69
5260	2017-07-10 08:15:00:000	78.07	501.83	77.63	35.47	7.69
5261	2017-07-10 08:30:00:000	77.14	496.33	75.66	35.51	7.68
5262	2017-07-10 08:45:00:000	74.79	484.0	74.06	35.58	7.67
5263	2017-07-10 09:00:00:000	70.31	461.83	68.44	35.65	7.67
5264	2017-07-10 09:15:00:000	69.11	446.42	68.44	35.7	7.66
5265	2017-07-10 09:30:00:000	66.82	431.42	66.47	35.75	7.65
5266	2017-07-10 09:45:00:000	64.53	418.75	64.41	35.75	7.64
5267	2017-07-10 10:00:00:000	61.72	398.75	60.05	35.72	7.63
5268	2017-07-10 10:15:00:000	60.89	395.17	60.75	35.76	7.63
5269	2017-07-10 10:30:00:000	58.54	380.67	58.78	35.87	7.61
5270	2017-07-10 10:45:00:000	57.14	371.5	57.66	36.01	7.62
5271	2017-07-10 11:00:00:000	53.44	355.25	52.59	36.11	7.62
5272	2017-07-10 11:15:00:000	53.7	348.92	54.09	36.2	7.61
5273	2017-07-10 11:30:00:000	52.29	339.83	52.59	36.3	7.61
5274	2017-07-10 11:45:00:000	50.57	328.5	50.34	36.42	7.61
5275	2017-07-10 12:00:00:000	48.13	315.42	46.97	36.5	7.62
5276	2017-07-10 12:15:00:	46.88	305.33	46.97	36.58	7.62

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
5277	2017-07-10 12:30:00:000	45.21	295.42	45.37	36.57	7.62
5278	2017-07-10 12:45:00:000	44.43	290.08	44.44	36.57	7.61
5279	2017-07-10 13:00:00:000	43.07	282.42	41.81	36.6	7.61
5280	2017-07-10 13:15:00:000	43.13	278.75	42.28	36.62	7.61
5281	2017-07-10 13:30:00:000	42.45	276.92	42.19	36.66	7.61
5282	2017-07-10 13:45:00:000	42.03	274.58	42.19	36.74	7.61
5283	2017-07-10 14:00:00:000	41.25	271.42	40.31	36.76	7.61
5284	2017-07-10 14:15:00:000	41.25	270.0	40.78	36.81	7.61
5285	2017-07-10 14:30:00:000	40.94	267.25	40.78	36.85	7.6
5286	2017-07-10 14:45:00:000	40.31	264.5	40.59	36.9	7.6
5287	2017-07-10 15:00:00:000	40.31	262.17	39.09	36.92	7.6
5288	2017-07-10 15:15:00:000	40.0	260.25	40.5	36.96	7.59
5289	2017-07-10 15:30:00:000	39.37	257.17	39.09	36.97	7.59
5290	2017-07-10 15:45:00:000	38.44	254.75	39.09	36.97	7.59
5291	2017-07-10 16:00:00:000	38.44	253.63	39.09	36.96	7.58
5292	2017-07-10 16:15:00:000	38.59	253.0	39.09	36.93	7.59
5293	2017-07-10 16:30:00:000	38.59	251.75	39.09	36.92	7.58
5294	2017-07-10 16:45:00:000	37.66	248.38	37.69	36.93	7.57
5295	2017-07-10 17:00:00:000	36.88	241.83	37.69	36.92	7.57
5296	2017-07-10 17:15:00:	35.99	237.58	36.0	36.91	7.57

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
5297	2017-07-10 17:30:00:000	36.35	236.42	36.56	36.88	7.56
5298	2017-07-10 17:45:00:000	39.53	254.67	40.22	36.81	7.57
5299	2017-07-10 18:00:00:000	45.83	286.33	45.38	36.72	7.59
5300	2017-07-10 18:15:00:000	50.99	324.58	51.56	36.63	7.6
5301	2017-07-10 18:30:00:000	56.41	357.17	56.16	36.54	7.61
5302	2017-07-10 18:45:00:000	59.22	378.08	58.87	36.48	7.64
5303	2017-07-10 19:00:00:000	59.58	384.0	58.31	36.45	7.65
5304	2017-07-10 19:15:00:000	62.5	399.42	61.88	36.43	7.66
5305	2017-07-10 19:30:00:000	63.91	408.5	64.13	36.41	7.67
5306	2017-07-10 19:45:00:000	64.53	414.92	64.59	36.4	7.68
5307	2017-07-10 20:00:00:000	62.81	409.08	61.5	36.39	7.69
5308	2017-07-10 20:15:00:000	66.64	423.5	66.37	36.33	7.7
5309	2017-07-10 20:30:00:000	70.26	447.08	69.75	36.25	7.72
5310	2017-07-10 20:45:00:000	70.57	453.92	70.22	36.24	7.73
5311	2017-07-10 21:00:00:000	66.82	440.42	65.16	36.25	7.74
5312	2017-07-10 21:15:00:000	69.43	444.42	68.62	36.24	7.74
5313	2017-07-10 21:30:00:000	70.63	450.33	69.19	36.25	7.75
5314	2017-07-10 21:45:00:000	70.31	454.0	69.75	36.24	7.75
5315	2017-07-10 22:00:00:000	70.16	454.12	68.77	36.25	7.75
5316	2017-07-10 22:15:00:	71.67	459.0	70.78	36.26	7.75

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
7377	2017-08-01 19:30:00:000	53.85	345.67	54.0	33.55	7.09
7378	2017-08-01 19:45:00:000	58.39	382.92	58.12	33.55	7.09
7379	2017-08-01 20:00:00:000	61.3	399.25	60.09	33.54	7.12
7380	2017-08-01 20:15:00:000	66.67	427.83	66.28	33.54	7.19
7381	2017-08-01 20:30:00:000	68.91	442.67	68.34	33.53	7.2
7382	2017-08-01 20:45:00:000	68.13	447.17	66.84	33.53	7.26
7383	2017-08-01 21:00:00:000	69.53	454.92	67.88	33.52	7.3
7384	2017-08-01 21:15:00:000	75.78	483.5	74.53	33.51	7.33
7385	2017-08-01 21:30:00:000	78.33	501.25	77.16	33.48	7.34
7386	2017-08-01 21:45:00:000	77.24	508.42	76.12	33.45	7.28
7387	2017-08-01 22:00:00:000	74.95	494.42	74.06	33.43	7.24
7388	2017-08-01 22:15:00:000	77.76	497.67	78.19	33.42	7.21
7389	2017-08-01 22:30:00:000	77.5	496.5	78.19	33.41	7.19
7390	2017-08-01 22:45:00:000	75.52	495.33	75.56	33.4	7.18
7391	2017-08-01 23:00:00:000	71.56	480.75	70.45	33.39	7.17
7392	2017-08-01 23:15:00:000	74.9	481.75	75.56	33.39	7.17
7393	2017-08-01 23:30:00:000	76.41	487.17	76.12	33.38	7.16
7394	2017-08-01 23:45:00:000	76.72	488.5	76.69	33.37	7.15
7395	2017-08-02 00:00:00:000	70.68	481.42	69.94	33.37	7.14
7396	2017-08-02 00:15:00:	76.04	484.83	75.56	33.36	7.14

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
7397	2017-08-02 00:30:00:000	75.78	485.0	75.09	33.36	7.13
7398	2017-08-02 00:45:00:000	77.24	493.08	76.59	33.36	7.13
7399	2017-08-02 01:00:00:000	70.36	483.5	68.91	33.35	7.12
7400	2017-08-02 01:15:00:000	76.35	488.5	75.56	33.35	7.11
7401	2017-08-02 01:30:00:000	77.76	496.83	77.16	33.35	7.11
7402	2017-08-02 01:45:00:000	78.07	500.33	77.72	33.35	7.11
7403	2017-08-02 02:00:00:000	73.59	499.42	72.0	33.34	7.1
7404	2017-08-02 02:15:00:000	78.96	505.75	77.62	33.34	7.09
7405	2017-08-02 02:30:00:000	80.16	511.33	78.19	33.34	7.09
7406	2017-08-02 02:45:00:000	81.56	522.08	80.25	33.33	7.08
7407	2017-08-02 03:00:00:000	75.57	498.08	73.5	33.33	7.08
7408	2017-08-02 03:15:00:000	79.9	512.58	79.12	33.34	7.08
7409	2017-08-02 03:30:00:000	79.9	512.67	79.12	33.34	7.07
7410	2017-08-02 03:45:00:000	78.75	504	78.19	33.33	7.07
7411	2017-08-02 04:00:00:000	73.07	480	71.62	33.33	7.06
7412	2017-08-02 04:15:00:000	77.55	495.0	76.22	33.33	7.05
7413	2017-08-02 04:30:00:000	78.44	502.17	77.25	33.33	7.05
7414	2017-08-02 04:45:00:000	78.44	501.83	76.78	33.33	7.05
7415	2017-08-02 05:00:00:000	74.69	491.92	72.56	33.33	7.04
7416	2017-08-02 05:15:00:	81.82	524.0	80.16	33.33	7.04

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
7417	2017-08-02 05:30:00:000	82.4	526.75	80.81	33.33	7.04
7418	2017-08-02 05:45:00:000	81.88	522.58	79.78	33.33	7.03
7419	2017-08-02 06:00:00:000	75.05	496.75	72.56	33.33	7.03
7420	2017-08-02 06:15:00:000	82.97	532.58	81.38	33.32	7.03
7421	2017-08-02 06:30:00:000	85.83	548.08	84.38	33.32	7.03
7422	2017-08-02 06:45:00:000	83.49	534.83	82.41	33.32	7.02
7423	2017-08-02 07:00:00:000	75.0	495.42	74.16	33.32	7.02
7424	2017-08-02 07:15:00:000	79.58	508.08	79.12	33.32	7.02
7425	2017-08-02 07:30:00:000	80.42	514.92	80.25	33.32	7.01
7426	2017-08-02 07:45:00:000	80.16	511.25	79.59	33.32	7.02
7427	2017-08-02 08:00:00:000	74.69	487.67	73.5	33.32	7.01
7428	2017-08-02 08:15:00:000	78.18	499.5	78.19	33.32	7.01
7429	2017-08-02 08:30:00:000	78.28	498.17	78.19	33.32	7.01
7430	2017-08-02 08:45:00:000	77.08	492.25	77.72	33.32	7.01
7431	2017-08-02 09:00:00:000	68.75	453.42	67.88	33.32	7.01
7432	2017-08-02 09:15:00:000	69.32	444.17	69.0	33.32	7
7433	2017-08-02 09:30:00:000	67.29	431.92	67.78	33.31	7.0
7434	2017-08-02 09:45:00:000	64.74	414.17	65.34	33.3	6.99
7435	2017-08-02 10:00:00:000	60.73	393.33	60.09	33.3	6.99
7436	2017-08-02 10:15:00:	58.12	373.92	58.59	33.29	6.98

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
7437	2017-08-02 10:30:00:000	53.49	345.17	54.47	33.28	6.97
7438	2017-08-02 10:45:00:000	48.33	310.67	48.75	33.28	6.97
7439	2017-08-02 11:00:00:000	41.2	273.92	41.62	33.27	6.97
7440	2017-08-02 11:15:00:000	41.2	265.83	41.44	33.26	6.96
7441	2017-08-02 11:30:00:000	44.84	288.83	45.09	33.26	6.96
7442	2017-08-02 11:45:00:000	46.56	299.75	47.06	33.26	6.96
7443	2017-08-02 12:00:00:000	46.56	302	47.53	33.26	6.96
7444	2017-08-02 12:15:00:000	47.34	305	48.66	33.26	6.96
7445	2017-08-02 12:30:00:000	47.34	306.0	48.66	33.26	6.96
7446	2017-08-02 12:45:00:000	48.12	308.42	48.94	33.27	6.97
7447	2017-08-02 13:00:00:000	42.14	283.08	41.72	33.28	6.97
7448	2017-08-02 13:15:00:000	43.96	283.67	44.25	33.29	6.97
7449	2017-08-02 13:30:00:000	45.63	293.58	46.31	33.3	6.98
7450	2017-08-02 13:45:00:000	47.92	308.08	48.37	33.29	6.97
7451	2017-08-02 14:00:00:000	46.04	303.92	45.66	33.28	6.97
7452	2017-08-02 14:15:00:000	48.28	312.5	49.22	33.27	6.96
7453	2017-08-02 14:30:00:000	49.38	319.67	50.81	33.27	6.97
7454	2017-08-02 14:45:00:000	51.41	331.92	52.31	33.27	6.97
7455	2017-08-02 15:00:00:000	48.59	321.08	49.22	33.27	6.97
7456	2017-08-02 15:15:00:	50.83	328.33	51.28	33.27	6.98

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
7457	2017-08-02 15:30:00:000	51.72	332.25	51.75	33.27	6.97
7458	2017-08-02 15:45:00:000	51.72	331.42	51.75	33.28	6.98
7459	2017-08-02 16:00:00:000	48.54	323.33	48.66	33.28	6.98
7460	2017-08-02 16:15:00:000	50.83	328.75	51.75	33.28	6.98
7461	2017-08-02 16:30:00:000	50.31	326.58	51.28	33.29	6.99
7462	2017-08-02 16:45:00:000	50.63	325.67	51.28	33.29	6.99
7463	2017-08-02 17:00:00:000	48.39	318.42	47.81	33.3	6.99
7464	2017-08-02 17:15:00:000	49.74	322.58	50.34	33.3	6.99
7465	2017-08-02 17:30:00:000	49.79	320.25	50.34	33.31	6.99
7466	2017-08-02 17:45:00:000	49.22	318.0	50.34	33.31	6.99
7467	2017-08-02 18:00:00:000	44.22	295.33	43.69	33.32	6.98
7468	2017-08-02 18:15:00:000	43.02	278.08	43.69	33.32	6.98
7469	2017-08-02 18:30:00:000	40.52	262.25	41.16	33.33	6.98
7470	2017-08-02 18:45:00:000	43.65	281.83	44.34	33.33	6.98
7471	2017-08-02 19:00:00:000	50.99	329.92	51.0	33.34	6.98
7472	2017-08-02 19:15:00:000	59.27	380.58	59.06	33.34	6.98
7473	2017-08-02 19:30:00:000	63.23	407.0	63.84	33.34	6.98
7474	2017-08-02 19:45:00:000	64.95	417.25	65.81	33.35	6.98
7475	2017-08-02 20:00:00:000	62.76	414.58	62.16	33.35	6.98
7476	2017-08-02 20:15:00:	68.39	437.75	68.91	33.36	6.98

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
7477	2017-08-02 20:30:00:000	70.1	448.67	70.59	33.36	6.98
7478	2017-08-02 20:45:00:000	72.03	459.12	72.0	33.38	6.98
7479	2017-08-02 21:00:00:000	64.74	432.42	63.84	33.37	6.98
7480	2017-08-02 21:15:00:000	67.29	430.17	66.75	33.37	6.98
7481	2017-08-02 21:30:00:000	65.31	419.25	64.31	33.37	6.98
7482	2017-08-02 21:45:00:000	70.7	442.88	68.2	33.37	6.98
7483	2017-08-02 22:00:00:000	77.29	495.75	73.59	33.37	6.99
7484	2017-08-02 22:15:00:000	85.78	543.0	82.41	33.38	6.99
7485	2017-08-02 22:30:00:000	84.58	543.08	82.41	33.38	6.99
7486	2017-08-02 22:45:00:000	82.4	528.92	80.72	33.38	6.99
7487	2017-08-02 23:00:00:000	75.0	510.75	73.03	33.38	6.99
7488	2017-08-02 23:15:00:000	80.99	514.0	79.69	33.39	6.99
7489	2017-08-02 23:30:00:000	85.7	543.5	83.67	33.39	6.99
7490	2017-08-02 23:45:00:000	87.4	557.92	85.78	33.39	6.99
7491	2017-08-03 00:00:00:000	84.58	556.58	82.31	33.39	6.99
7492	2017-08-03 00:15:00:000	89.74	569.17	88.41	33.39	6.99
7493	2017-08-03 00:30:00:000	89.48	573.42	88.87	33.39	6.99
7494	2017-08-03 00:45:00:000	88.59	566.17	87.47	33.4	6.99
7495	2017-08-03 01:00:00:000	88.39	563.33	87.47	33.4	6.99
7496	2017-08-03 01:15:00:	87.5	559.25	87.47	33.4	6.99

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
9857	2017-08-27 20:15:00:000	78.44	494.17	78.28	36.45	7.76
9858	2017-08-27 20:30:00:000	80.99	515.42	80.16	36.38	7.77
9859	2017-08-27 20:45:00:000	82.66	527.67	81.84	36.29	7.77
9860	2017-08-27 22:30:00:000	85.16	546.88	84.38	36.14	7.79
9861	2017-08-27 22:45:00:000	86.93	552.92	85.78	36.05	7.8
9862	2017-08-27 23:00:00:000	70.42	483.58	69.0	35.85	7.82
9863	2017-08-27 23:15:00:000	20.94	179.08	19.31	35.61	7.82
9864	2017-08-27 23:30:00:000	69.58	394.42	67.97	35.57	7.81
9865	2017-08-27 23:45:00:000	86.88	542.5	85.78	35.79	7.79
9866	2017-08-28 00:00:00:000	78.12	520.33	76.03	35.95	7.81
9867	2017-08-28 00:15:00:000	80.94	517.25	79.59	36.03	7.81
9868	2017-08-28 00:30:00:000	80.42	513.5	79.12	36.07	7.82
9869	2017-08-28 00:45:00:000	78.7	504.0	78.19	36.13	7.82
9870	2017-08-28 01:00:00:000	70.99	474.17	69.47	36.19	7.82
9871	2017-08-28 01:15:00:000	74.06	474.5	73.41	36.22	7.82
9872	2017-08-28 01:30:00:000	74.06	474.5	73.41	36.24	7.82
9873	2017-08-28 01:45:00:000	73.28	469.08	72.56	36.25	7.82
9874	2017-08-28 02:00:00:000	68.44	450.5	66.38	36.25	7.81
9875	2017-08-28 02:15:00:000	71.56	456.5	71.53	36.25	7.81
9876	2017-08-28 02:30:00:	71.56	457.33	71.53	36.26	7.79

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
9877	2017-08-28 02:45:00:000	63.91	424.75	63.94	36.23	7.77
9878	2017-08-28 03:00:00:000	17.86	208.92	17.25	36.15	7.79
9879	2017-08-28 03:15:00:000	9.64	73.83	9.09	36.22	7.81
9880	2017-08-28 03:30:00:000	12.5	77.5	11.72	36.11	7.82
9881	2017-08-28 03:45:00:000	57.45	323.25	56.72	36.11	7.81
9882	2017-08-28 04:00:00:000	65.63	403.5	62.72	36.1	7.8
9883	2017-08-28 04:15:00:000	75	471.5	73.69	36.09	7.83
9884	2017-08-28 04:30:00:000	75.0	482.25	75.09	36.09	7.86
9885	2017-08-28 05:15:00:000	74.06	470.0	73.41	36.11	7.84
9886	2017-08-28 06:30:00:000	74.22	475.5	73.69	36.09	7.79
9887	2017-08-28 07:00:00:000	71.64	455.12	70.45	36.07	7.76
9888	2017-08-28 07:15:00:000	75.0	476.75	75.09	36.04	7.75
9889	2017-08-28 07:30:00:000	76.72	489	76.78	35.97	7.74
9890	2017-08-28 08:30:00:000	82.5	527.0	82.41	35.72	7.75
9891	2017-08-28 09:45:00:000	55.78	360.75	56.25	36.73	7.73
9892	2017-08-28 10:45:00:000	59.53	382.5	60.05	36.74	7.69
9893	2017-08-28 11:15:00:000	63.28	409.75	63.84	36.81	7.71
9894	2017-08-28 11:45:00:000	59.84	387.75	59.34	37.09	7.69
9895	2017-08-28 12:00:00:000	55.62	362	54.56	37.19	7.7
9896	2017-08-28 13:00:00:	58.13	370.0	57.38	37.21	7.66

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
9897	2017-08-28 13:15:00:000	57.34	372.75	57.66	37.29	7.66
9898	2017-08-28 14:00:00:000	52.97	375.5	51.47	37.37	7.66
9899	2017-08-28 14:30:00:000	56.09	362.5	56.53	37.07	7.67
9900	2017-08-28 15:00:00:000	57.5	372.0	55.97	37.0	7.68
9901	2017-08-28 15:15:00:000	59.69	382.25	59.62	37.05	7.67
9902	2017-08-28 15:30:00:000	58.44	376.67	58.69	37.07	7.67
9903	2017-08-28 15:45:00:000	57.03	367.58	57.09	37.09	7.65
9904	2017-08-28 16:00:00:000	53.59	352.58	53.16	37.06	7.65
9905	2017-08-28 16:15:00:000	53.59	344.92	53.72	37.07	7.65
9906	2017-08-28 16:30:00:000	53.59	343.58	53.72	37.06	7.64
9907	2017-08-28 16:45:00:000	53.91	346.33	54.66	37.03	7.63
9908	2017-08-28 17:00:00:000	55.1	352.67	55.13	37.01	7.62
9909	2017-08-28 17:15:00:000	55.16	354.42	55.13	37.02	7.62
9910	2017-08-28 17:30:00:000	54.53	351.75	55.13	37.01	7.62
9911	2017-08-28 17:45:00:000	54.22	352.17	54.66	37.0	7.62
9912	2017-08-28 18:00:00:000	54.84	352.67	54.66	36.97	7.61
9913	2017-08-28 18:15:00:000	56.82	362.58	57.28	36.92	7.59
9914	2017-08-28 18:30:00:000	62.24	392.92	62.25	36.72	7.58
9915	2017-08-28 18:45:00:000	68.8	442.0	67.97	36.5	7.58
9916	2017-08-28 19:00:00:	72.76	464.17	71.06	36.31	7.57

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
9917	2017-08-28 19:15:00:000	79.77	502.0	79.03	36.19	7.58
9918	2017-08-28 19:30:00:000	82.14	521.25	81.28	36.11	7.59
9919	2017-08-28 19:45:00:000	84.11	535.33	83.44	36.06	7.61
9920	2017-08-28 20:00:00:000	78.49	531.33	77.16	36.03	7.65
9921	2017-08-28 20:15:00:000	84.43	534.92	83.91	36.01	7.68
9922	2017-08-28 20:30:00:000	85.83	546.67	84.84	35.99	7.7
9923	2017-08-28 20:45:00:000	86.09	549.83	85.87	35.96	7.72
9924	2017-08-28 21:00:00:000	80.16	542.17	78.75	35.96	7.72
9925	2017-08-28 21:15:00:000	85.26	540.33	83.91	35.95	7.73
9926	2017-08-28 21:30:00:000	86.09	548.0	84.38	35.96	7.72
9927	2017-08-28 21:45:00:000	85.31	546.67	84.38	35.95	7.71
9928	2017-08-28 22:00:00:000	78.7	521.75	76.69	35.89	7.7
9929	2017-08-28 22:15:00:000	84.06	533.58	83.44	35.87	7.67
9930	2017-08-28 22:30:00:000	85.0	540.33	84.38	35.84	7.66
9931	2017-08-28 22:45:00:000	83.75	536.17	83.44	35.84	7.63
9932	2017-08-28 23:00:00:000	78.12	512.67	76.13	35.9	7.62
9933	2017-08-28 23:15:00:000	82.4	523.58	81.28	35.95	7.6
9934	2017-08-28 23:30:00:000	82.66	528.92	81.84	35.95	7.59
9935	2017-08-28 23:45:00:000	83.18	530.75	82.97	35.93	7.58
9936	2017-08-29 00:00:00:	78.12	511.75	76.22	35.91	7.58

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
10657	2017-09-06 00:30:00:000	97.19	620.5	96.47	34.47	7.63
10658	2017-09-06 00:45:00:000	97.19	622.25	96.47	34.46	7.62
10659	2017-09-06 01:00:00:000	90.57	597.33	89.44	34.46	7.62
10660	2017-09-06 01:15:00:000	96.61	612.25	96.0	34.46	7.61
10661	2017-09-06 01:30:00:000	97.97	622.83	97.59	34.46	7.61
10662	2017-09-06 01:45:00:000	97.97	625.42	98.16	34.43	7.6
10663	2017-09-06 02:00:00:000	91.46	601.42	89.91	34.43	7.59
10664	2017-09-06 02:15:00:000	97.71	618.25	97.03	34.42	7.59
10665	2017-09-06 02:30:00:000	98.91	627.83	98.16	34.41	7.58
10666	2017-09-06 02:45:00:000	98.91	629.67	98.16	34.4	7.58
10667	2017-09-06 03:00:00:000	92.4	606.5	91.41	34.39	7.57
10668	2017-09-06 03:15:00:000	98.07	621.58	97.59	34.39	7.56
10669	2017-09-06 03:30:00:000	98.91	632.0	98.16	34.39	7.56
10670	2017-09-06 03:45:00:000	99.69	634.25	99.28	34.37	7.56
10671	2017-09-06 04:00:00:000	92.14	606.08	90.47	34.37	7.55
10672	2017-09-06 04:15:00:000	98.33	622.33	97.78	34.37	7.55
10673	2017-09-06 04:30:00:000	99.74	634.33	99.84	34.36	7.55
10674	2017-09-06 04:45:00:000	99.79	636.0	99.84	34.36	7.54
10675	2017-09-06 05:00:00:000	91.3	604.75	90.0	34.35	7.54
10676	2017-09-06 05:15:00:	98.65	622.83	97.78	34.35	7.54

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
10677	2017-09-06 05:30:00:000	99.69	635.17	99.84	34.34	7.53
10678	2017-09-06 05:45:00:000	99.79	636.0	99.84	34.34	7.53
10679	2017-09-06 06:00:00:000	92.45	611.08	91.03	34.34	7.52
10680	2017-09-06 06:15:00:000	98.91	626.5	98.91	34.33	7.53
10681	2017-09-06 06:30:00:000	99.74	635.58	99.84	34.32	7.52
10682	2017-09-06 06:45:00:000	99.79	636.0	99.84	34.32	7.52
10683	2017-09-06 07:00:00:000	92.4	608.42	91.59	34.32	7.51
10684	2017-09-06 07:15:00:000	97.81	621.5	97.59	34.33	7.52
10685	2017-09-06 07:30:00:000	97.97	626.33	98.16	34.36	7.51
10686	2017-09-06 07:45:00:000	97.4	623.08	97.03	34.38	7.51
10687	2017-09-06 08:00:00:000	89.58	593.08	88.22	34.39	7.5
10688	2017-09-06 08:15:00:000	94.58	602.58	94.31	34.4	7.49
10689	2017-09-06 08:30:00:000	94.9	607.0	94.78	34.43	7.48
10690	2017-09-06 08:45:00:000	94.32	605.75	94.78	34.47	7.47
10691	2017-09-06 09:00:00:000	87.24	579.0	86.06	34.63	7.51
10692	2017-09-06 09:15:00:000	90.89	580.83	90.28	34.88	7.56
10693	2017-09-06 09:30:00:000	90.31	579.5	89.72	35.14	7.62
10694	2017-09-06 09:45:00:000	88.33	567.5	87.09	35.5	7.71
10695	2017-09-06 10:00:00:000	78.91	527.67	76.31	35.83	7.77
10696	2017-09-06 10:15:00:	79.22	509.58	77.81	35.98	7.78

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
10697	2017-09-06 10:30:00:000	73.8	480.08	73.31	36.14	7.8
10698	2017-09-06 10:45:00:000	69.9	453.33	69.09	36.24	7.78
10699	2017-09-06 11:00:00:000	64.48	427.58	63.0	36.3	7.74
10700	2017-09-06 11:15:00:000	69.01	440.75	68.16	36.44	7.74
10701	2017-09-06 11:30:00:000	69.79	447.83	68.62	36.6	7.74
10702	2017-09-06 11:45:00:000	70.36	450.5	70.03	36.68	7.74
10703	2017-09-06 12:00:00:000	66.56	436.42	65.06	36.74	7.74
10704	2017-09-06 12:15:00:000	69.37	444.67	68.62	36.74	7.73
10705	2017-09-06 12:30:00:000	69.11	446.5	68.62	36.75	7.72
10706	2017-09-06 12:45:00:000	68.59	442.75	68.53	36.71	7.71
10707	2017-09-06 13:00:00:000	64.27	425.58	63.47	36.71	7.7
10708	2017-09-06 13:15:00:000	67.5	431.08	66.94	36.8	7.68
10709	2017-09-06 13:30:00:000	66.67	429.75	66.0	36.81	7.66
10710	2017-09-06 13:45:00:000	65.78	425.17	65.53	36.82	7.64
10711	2017-09-06 14:00:00:000	61.46	406.5	59.81	36.86	7.62
10712	2017-09-06 14:15:00:000	63.7	408.25	63.38	36.86	7.61
10713	2017-09-06 14:30:00:000	64.74	417.83	64.97	36.81	7.62
10714	2017-09-06 14:45:00:000	66.2	425.42	65.44	36.8	7.65
10715	2017-09-06 15:00:00:000	66.72	428.17	66.94	36.77	7.66
10716	2017-09-06 15:15:00:	66.72	430.0	66.94	36.76	7.66

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
10717	2017-09-06 15:30:00:000	67.24	433.67	66.94	36.69	7.67
10718	2017-09-06 15:45:00:000	67.5	436.75	67.87	36.65	7.68
10719	2017-09-06 16:00:00:000	67.86	439.5	65.81	36.44	7.66
10720	2017-09-06 16:15:00:000	74.06	473.0	73.97	36.2	7.65
10721	2017-09-06 16:30:00:000	78.12	499.75	78.09	35.99	7.64
10722	2017-09-06 16:45:00:000	81.51	522.0	80.53	35.79	7.64
10723	2017-09-06 17:00:00:000	79.79	525.25	78.56	35.57	7.62
10724	2017-09-06 17:15:00:000	85.83	546.5	84.75	35.5	7.6
10725	2017-09-06 17:30:00:000	85.89	552.08	85.31	35.42	7.6
10726	2017-09-06 17:45:00:000	85.62	549.42	85.31	35.38	7.59
10727	2017-09-06 18:00:00:000	79.38	525.75	78.84	35.31	7.59
10728	2017-09-06 18:15:00:000	86.3	548.58	86.06	35.2	7.58
10729	2017-09-06 18:30:00:000	87.5	560.75	87.19	35.19	7.58
10730	2017-09-06 18:45:00:000	87.5	558.58	87.19	35.12	7.58
10731	2017-09-06 19:00:00:000	81.25	539.17	80.53	35.09	7.58
10732	2017-09-06 19:15:00:000	86.46	548.67	85.78	35.11	7.58
10733	2017-09-06 19:30:00:000	86.46	553.25	86.25	35.13	7.58
10734	2017-09-06 19:45:00:000	87.29	557.42	86.72	35.16	7.65
10735	2017-09-06 20:00:00:000	82.5	544.25	80.63	35.21	7.7
10736	2017-09-06 20:15:00:	88.18	560.58	86.72	35.29	7.74

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
10737	2017-09-06 20:30:00:000	88.18	565.08	87.19	35.37	7.76
10738	2017-09-06 20:45:00:000	87.92	563.33	87.19	35.26	7.74
10739	2017-09-06 21:00:00:000	84.01	550.58	82.12	35.25	7.73
10740	2017-09-06 21:15:00:000	87.92	560.17	86.72	35.33	7.75
10741	2017-09-06 21:30:00:000	87.66	563.33	87.19	35.36	7.75
10742	2017-09-06 21:45:00:000	87.66	561.0	86.25	35.38	7.76
10743	2017-09-06 22:00:00:000	81.41	539.83	79.59	35.38	7.75
10744	2017-09-06 22:15:00:000	86.56	550.67	85.31	35.37	7.75
10745	2017-09-06 22:30:00:000	86.88	555.67	85.78	35.37	7.75
10746	2017-09-06 22:45:00:000	86.88	554.67	85.78	35.38	7.75
10747	2017-09-06 23:00:00:000	80.36	532.5	78.19	35.35	7.75
10748	2017-09-06 23:15:00:000	85.99	545.25	85.31	35.34	7.74
10749	2017-09-06 23:30:00:000	86.88	555.58	85.78	35.31	7.73
10750	2017-09-06 23:45:00:000	87.66	557.83	85.78	35.29	7.73
10751	2017-09-07 00:00:00:000	82.34	541.58	80.72	35.27	7.73
10752	2017-09-07 00:15:00:000	87.4	553.83	85.78	35.26	7.73
10753	2017-09-07 00:30:00:000	87.71	561.17	86.91	35.28	7.73
10754	2017-09-07 00:45:00:000	87.81	560.75	85.78	35.3	7.74
10755	2017-09-07 01:00:00:000	82.14	541.67	79.78	35.31	7.73
10756	2017-09-07 01:15:00:	86.61	551.67	85.78	35.32	7.74

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
11377	2017-09-13 22:15:00:000	81.3	515.83	78.66	36.21	7.68
11378	2017-09-13 22:30:00:000	81.88	522.17	78.66	36.21	7.68
11379	2017-09-13 22:45:00:000	81.56	520.83	78.19	36.15	7.68
11380	2017-09-13 23:00:00:000	76.51	502.67	73.03	36.24	7.69
11381	2017-09-13 23:15:00:000	80.99	513.17	77.72	36.23	7.68
11382	2017-09-13 23:30:00:000	81.88	521.25	79.31	36.08	7.66
11383	2017-09-13 23:45:00:000	81.56	521.75	78.75	36.11	7.64
11384	2017-09-14 00:00:00:000	79.9	513.67	77.25	36.1	7.63
11385	2017-09-14 00:15:00:000	79.32	507.67	77.25	36.27	7.64
11386	2017-09-14 00:30:00:000	77.11	495.25	75.23	36.39	7.66
11387	2017-09-14 00:45:00:000	76.98	491.0	74.53	36.28	7.67
11388	2017-09-14 01:00:00:000	73.33	491.33	70.59	36.18	7.66
11389	2017-09-14 01:15:00:000	78.96	500.42	76.69	36.11	7.65
11390	2017-09-14 01:30:00:000	80.16	512.25	78.19	36.1	7.65
11391	2017-09-14 01:45:00:000	81.25	519.5	78.66	36.06	7.65
11392	2017-09-14 02:00:00:000	77.08	505.0	73.59	36.03	7.66
11393	2017-09-14 02:15:00:000	66.77	445.58	63.84	35.92	7.66
11394	2017-09-14 02:30:00:000	23.83	177.0	20.53	35.74	7.68
11395	2017-09-14 02:45:00:000	22.19	148.08	18.28	35.59	7.65
11396	2017-09-14 03:00:00:000	23.85	151.83	19.87	35.66	7.66

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
11397	2017-09-14 03:15:00:000	53.39	309.58	46.97	35.98	7.67
11398	2017-09-14 03:30:00:000	80.68	492.25	76.59	35.91	7.68
11399	2017-09-14 03:45:00:000	85.23	536.25	82.41	35.87	7.67
11400	2017-09-14 04:00:00:000	80.99	529.42	77.72	35.7	7.64
11401	2017-09-14 04:15:00:000	85.83	544.42	83.34	35.63	7.6
11402	2017-09-14 04:30:00:000	85.57	546.25	83.44	35.63	7.57
11403	2017-09-14 04:45:00:000	83.8	536.75	82.41	35.63	7.55
11404	2017-09-14 05:00:00:000	76.72	509.08	74.16	35.64	7.53
11405	2017-09-14 05:15:00:000	81.3	515.92	79.31	35.64	7.51
11406	2017-09-14 05:30:00:000	81.88	522.17	79.87	35.62	7.49
11407	2017-09-14 05:45:00:000	81.88	522.58	79.78	35.61	7.48
11408	2017-09-14 06:00:00:000	76.46	501.33	74.16	35.62	7.48
11409	2017-09-14 06:15:00:000	80.21	510.92	79.31	35.65	7.48
11410	2017-09-14 06:30:00:000	80.94	518.17	79.78	35.61	7.48
11411	2017-09-14 06:45:00:000	81.88	520.83	79.59	35.58	7.48
11412	2017-09-14 07:00:00:000	75.83	500.42	74.16	35.56	7.47
11413	2017-09-14 07:15:00:000	80.94	512.5	79.12	35.55	7.46
11414	2017-09-14 07:30:00:000	81.72	520.67	79.59	35.54	7.46
11415	2017-09-14 07:45:00:000	82.5	526.58	81.0	35.5	7.47
11416	2017-09-14 08:00:00:	83.54	536.42	82.41	35.43	7.47

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
11417	2017-09-14 08:15:00:000	84.06	538.58	82.41	35.48	7.48
11418	2017-09-14 08:30:00:000	84.01	539.0	82.41	35.55	7.5
11419	2017-09-14 08:45:00:000	83.44	537.08	81.47	35.79	7.53
11420	2017-09-14 09:00:00:000	76.82	511.25	74.16	36.07	7.57
11421	2017-09-14 09:15:00:000	78.23	503.58	76.22	36.12	7.57
11422	2017-09-14 09:30:00:000	75.99	489.92	73.03	36.31	7.57
11423	2017-09-14 09:45:00:000	72.81	470.42	70.5	36.48	7.57
11424	2017-09-14 10:00:00:000	63.44	441	61.59	36.64	7.57
11425	2017-09-14 10:30:00:000	65.23	420.0	64.13	36.72	7.57
11426	2017-09-14 10:45:00:000	65.16	418.83	63.84	36.84	7.57
11427	2017-09-14 11:00:00:000	60.89	402.92	58.22	36.89	7.57
11428	2017-09-14 11:15:00:000	65.1	415.92	63.38	36.79	7.56
11429	2017-09-14 11:30:00:000	67.08	430.5	64.97	36.8	7.54
11430	2017-09-14 11:45:00:000	64.69	419.12	63.0	37.09	7.57
11431	2017-09-14 12:00:00:000	59.06	393.75	56.53	37.24	7.6
11432	2017-09-14 12:15:00:000	60.78	392.42	59.06	37.37	7.61
11433	2017-09-14 12:30:00:000	59.9	389.17	57.94	37.56	7.64
11434	2017-09-14 12:45:00:000	57.03	373.33	55.03	37.75	7.69
11435	2017-09-14 13:00:00:000	52.14	348.42	49.31	37.81	7.71
11436	2017-09-14 13:15:00:	52.19	338.92	49.78	37.84	7.71

143 782

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
11437	2017-09-14 13:30:00:000	50.99	332.42	48.84	37.86	7.7
11438	2017-09-14 13:45:00:000	54.22	347.63	52.73	37.7	7.64
11439	2017-09-14 14:00:00:000	59.17	379.08	56.44	37.48	7.6
11440	2017-09-14 14:15:00:000	66.3	422.08	65.06	37.3	7.59
11441	2017-09-14 14:30:00:000	69.43	445.25	67.78	37.15	7.57
11442	2017-09-14 14:45:00:000	71.72	460.17	70.22	37.04	7.57
11443	2017-09-14 15:00:00:000	70.0	458.83	68.25	36.92	7.56
11444	2017-09-14 15:15:00:000	75.68	482.42	73.78	36.76	7.57
11445	2017-09-14 15:30:00:000	76.88	493.75	75.09	36.63	7.57
11446	2017-09-14 15:45:00:000	78.12	503.37	75.94	36.63	7.6
11447	2017-09-14 16:00:00:000	76.56	499.75	73.87	36.55	7.62
11448	2017-09-14 16:15:00:000	80.31	515.5	77.34	36.52	7.65
11449	2017-09-14 16:30:00:000	81.09	521.5	79.03	36.47	7.66
11450	2017-09-14 16:45:00:000	81.61	525.17	79.03	36.42	7.68
11451	2017-09-14 17:00:00:000	75.21	501.08	72.38	36.46	7.7
11452	2017-09-14 17:15:00:000	78.33	503.0	75.94	36.58	7.7
11453	2017-09-14 17:30:00:000	75.83	490.67	72.94	36.71	7.7
11454	2017-09-14 17:45:00:000	73.59	476.25	71.44	36.72	7.69
11455	2017-09-14 18:00:00:000	70.7	453.12	66.94	36.61	7.67
11456	2017-09-14 18:15:00:	74.06	473	72.28	36.62	7.64

144 783

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
11457	2017-09-14 18:30:00:000	74.53	479.0	73.13	36.62	7.63
11458	2017-09-14 18:45:00:000	73.75	474.38	71.72	36.63	7.62
11459	2017-09-14 19:00:00:000	69.14	464.25	67.08	36.59	7.6
11460	2017-09-14 19:15:00:000	72.66	465.67	71.16	36.55	7.6
11461	2017-09-14 19:30:00:000	73.75	474.5	73.41	36.41	7.59
11462	2017-09-14 19:45:00:000	74.69	479.25	73.41	36.33	7.6
11463	2017-09-14 20:00:00:000	70.08	469.87	67.92	36.3	7.6
11464	2017-09-14 20:15:00:000	74.77	476.0	73.41	36.24	7.61
11465	2017-09-14 20:30:00:000	76.41	488.87	74.81	36.21	7.61
11466	2017-09-14 20:45:00:000	76.87	492.88	74.81	36.19	7.62
11467	2017-09-14 21:00:00:000	74.3	475.75	71.86	36.17	7.63
11468	2017-09-14 21:15:00:000	78.7	500.67	76.5	36.15	7.64
11469	2017-09-14 21:30:00:000	80.47	513.33	78.09	36.12	7.65
11470	2017-09-14 21:45:00:000	79.06	522.12	76.5	36.08	7.66
11471	2017-09-14 22:00:00:000	79.06	503.87	75.8	36.06	7.67
11472	2017-09-14 22:15:00:000	82.89	528.37	80.3	36.04	7.67
11473	2017-09-14 22:30:00:000	83.39	532.33	81.0	36.03	7.66
11474	2017-09-14 22:45:00:000	83.02	532.33	80.53	36.08	7.66
11475	2017-09-14 23:00:00:000	76.77	508.83	73.97	36.1	7.66
11476	2017-09-14 23:15:00:	81.46	518.33	79.12	36.11	7.66

145 784

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
11477	2017-09-14 23:30:00:000	81.72	522.42	79.59	36.11	7.65
11478	2017-09-14 23:45:00:000	80.47	516.88	78.19	36.23	7.66
11479	2017-09-15 00:00:00:000	75.73	495.75	72.94	36.16	7.66
11480	2017-09-15 00:15:00:000	80.0	508.42	77.62	36.12	7.65
11481	2017-09-15 00:30:00:000	80.94	516.25	78.19	36.1	7.65
11482	2017-09-15 00:45:00:000	80.94	517.58	78.19	36.09	7.64
11483	2017-09-15 01:00:00:000	80.05	514.42	77.25	36.06	7.64
11484	2017-09-15 01:15:00:000	81.72	521.17	79.12	35.96	7.64
11485	2017-09-15 01:30:00:000	83.12	530.67	80.63	35.91	7.64
11486	2017-09-15 01:45:00:000	83.7	536.08	81.0	35.93	7.65
11487	2017-09-15 02:00:00:000	77.76	515.75	74.53	35.93	7.65
11488	2017-09-15 02:15:00:000	83.18	527.0	80.53	35.91	7.65
11489	2017-09-15 02:30:00:000	83.44	533.42	81.0	35.92	7.65
11490	2017-09-15 02:45:00:000	82.81	531.08	80.53	35.9	7.64
11491	2017-09-15 03:00:00:000	77.45	509.83	74.44	35.86	7.63
11492	2017-09-15 03:15:00:000	82.24	522.08	80.06	35.75	7.62
11493	2017-09-15 03:30:00:000	83.44	531.08	81.19	35.65	7.61
11494	2017-09-15 03:45:00:000	83.44	533.33	81.28	35.58	7.61
11495	2017-09-15 04:00:00:000	78.65	515.75	76.13	35.6	7.62
11496	2017-09-15 04:15:00:	82.6	525.67	80.72	35.66	7.62

146 785

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
14457	2017-10-16 20:45:00:000	85.94	548.33	84.38	35.78	7.87
14458	2017-10-16 21:00:00:000	82.03	533.5	78.66	35.79	7.87
14459	2017-10-16 21:15:00:000	83.44	534.33	81.28	35.8	7.87
14460	2017-10-16 21:30:00:000	83.44	535.25	81.28	35.79	7.87
14461	2017-10-16 21:45:00:000	84.06	537.08	81.28	35.78	7.88
14462	2017-10-16 22:00:00:000	82.03	531.25	79.22	35.77	7.89
14463	2017-10-16 22:15:00:000	84.58	538.92	82.31	35.76	7.9
14464	2017-10-16 22:30:00:000	85.78	547.08	83.44	35.72	7.91
14465	2017-10-16 22:45:00:000	87.14	555.25	84.38	35.7	7.92
14466	2017-10-16 23:00:00:000	84.64	549.83	80.25	35.66	7.93
14467	2017-10-16 23:15:00:000	88.44	561.67	85.41	35.59	7.93
14468	2017-10-16 23:30:00:000	89.53	569.83	87.0	35.5	7.92
14469	2017-10-16 23:45:00:000	89.53	573.08	87.47	35.4	7.9
14470	2017-10-17 00:00:00:000	87.81	566.67	84.38	35.28	7.87
14471	2017-10-17 00:15:00:000	91.88	582.58	89.44	35.23	7.84
14472	2017-10-17 00:30:00:000	92.45	589.33	90.56	35.18	7.84
14473	2017-10-17 00:45:00:000	92.19	589.33	90.56	35.15	7.84
14474	2017-10-17 01:00:00:000	92.19	589.33	90.56	35.2	7.85
14475	2017-10-17 01:15:00:000	92.97	593.0	90.56	35.12	7.85
14476	2017-10-17 01:30:00:	94.48	602.17	92.06	35.05	7.83

147 786

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
14477	2017-10-17 01:45:00:000	94.69	604.5	92.16	35.04	7.82
14478	2017-10-17 02:00:00:000	90.73	590.33	86.53	35.0	7.82
14479	2017-10-17 02:15:00:000	93.59	596.25	91.69	34.98	7.8
14480	2017-10-17 02:30:00:000	94.17	600.75	92.25	34.97	7.81
14481	2017-10-17 02:45:00:000	94.69	604.5	92.25	34.96	7.81
14482	2017-10-17 03:00:00:000	91.61	592.5	87.56	34.96	7.81
14483	2017-10-17 03:15:00:000	94.53	601.67	92.25	34.94	7.81
14484	2017-10-17 03:30:00:000	95.36	606.25	92.72	34.94	7.81
14485	2017-10-17 03:45:00:000	95.1	608.0	92.72	34.93	7.8
14486	2017-10-17 04:00:00:000	93.02	599.33	89.53	34.93	7.8
14487	2017-10-17 04:15:00:000	95.36	606.25	92.72	34.93	7.81
14488	2017-10-17 04:30:00:000	95.62	610.75	93.66	34.93	7.82
14489	2017-10-17 04:45:00:000	96.51	613.5	93.66	34.92	7.82
14490	2017-10-17 05:00:00:000	92.81	601.75	88.59	34.92	7.83
14491	2017-10-17 05:15:00:000	95.62	609.62	93.66	34.95	7.85
14492	2017-10-17 05:30:00:000	96.56	612.67	93.66	34.98	7.87
14493	2017-10-17 05:45:00:000	96.82	615.83	93.66	34.94	7.86
14494	2017-10-17 06:00:00:000	93.65	606.75	89.62	34.91	7.84
14495	2017-10-17 06:15:00:000	97.4	617.17	94.78	34.91	7.84
14496	2017-10-17 06:30:00:000	97.34	622.17	95.34	34.9	7.84

148 787

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
14497	2017-10-17 06:45:00:000	97.34	622.17	95.34	34.91	7.84
14498	2017-10-17 07:00:00:000	93.13	606.75	89.62	34.89	7.83
14499	2017-10-17 07:15:00:000	97.08	616.67	94.13	34.88	7.82
14500	2017-10-17 07:30:00:000	97.19	620.58	95.06	34.87	7.81
14501	2017-10-17 07:45:00:000	96.98	620.83	94.97	34.84	7.79
14502	2017-10-17 08:00:00:000	93.44	596.88	89.3	34.82	7.79
14503	2017-10-17 08:15:00:000	95.94	612.92	93.28	34.9	7.81
14504	2017-10-17 08:30:00:000	96.82	619.25	94.31	34.97	7.83
14505	2017-10-17 08:45:00:000	96.87	621.58	93.84	35.06	7.86
14506	2017-10-17 09:00:00:000	92.86	606.25	87.66	35.17	7.88
14507	2017-10-17 09:15:00:000	95.68	610.83	91.69	35.31	7.88
14508	2017-10-17 09:30:00:000	93.39	600.67	90.19	35.46	7.9
14509	2017-10-17 09:45:00:000	89.95	580.67	86.62	35.57	7.9
14510	2017-10-17 10:00:00:000	82.86	549.5	78.19	35.67	7.91
14511	2017-10-17 10:15:00:000	84.84	544.0	81.47	35.74	7.92
14512	2017-10-17 10:30:00:000	84.84	545.33	81.94	35.79	7.93
14513	2017-10-17 10:45:00:000	84.22	540.25	81.0	35.85	7.93
14514	2017-10-17 11:00:00:000	80.16	526.25	76.12	35.9	7.91
14515	2017-10-17 11:15:00:000	82.19	526.17	79.13	35.96	7.89
14516	2017-10-17 11:30:00:	81.2	523.42	79.03	35.98	7.87

149 788

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
14517	2017-10-17 11:45:00:000	80.31	517.5	78.09	36.04	7.85
14518	2017-10-17 12:00:00:000	74.95	495.75	71.91	36.12	7.84
14519	2017-10-17 12:15:00:000	76.98	493.0	74.91	36.09	7.81
14520	2017-10-17 12:30:00:000	78.59	505.17	77.06	36.04	7.79
14521	2017-10-17 12:45:00:000	80.0	515.0	78.47	36.02	7.79
14522	2017-10-17 13:00:00:000	77.66	508.67	74.34	36.0	7.78
14523	2017-10-17 13:15:00:000	81.04	518.67	78.47	35.99	7.78
14524	2017-10-17 13:30:00:000	82.4	529.08	80.44	35.94	7.75
14525	2017-10-17 13:45:00:000	83.49	536.83	81.37	35.9	7.74
14526	2017-10-17 14:00:00:000	81.51	534.08	78.37	35.86	7.73
14527	2017-10-17 14:15:00:000	85.78	547.67	82.97	35.84	7.73
14528	2017-10-17 14:30:00:000	86.09	553	83.53	35.81	7.72
14529	2017-10-17 14:45:00:000	86.09	554.0	83.53	35.81	7.73
14530	2017-10-17 15:00:00:000	82.66	543.17	79.41	35.81	7.75
14531	2017-10-17 15:15:00:000	85.78	549.83	83.34	35.79	7.75
14532	2017-10-17 15:30:00:000	86.09	554.42	83.53	35.77	7.76
14533	2017-10-17 15:45:00:000	86.09	554.83	83.34	35.75	7.78
14534	2017-10-17 16:00:00:000	82.6	544.42	78.84	35.71	7.78
14535	2017-10-17 16:15:00:000	86.35	553.08	84.0	35.67	7.77
14536	2017-10-17 16:30:00:000	86.88	560.0	85.03	35.59	7.76

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
14537	2017-10-17 16:45:00:000	87.19	562.25	85.22	35.59	7.77
14538	2017-10-17 17:00:00:000	84.37	553.58	81.56	35.56	7.77
14539	2017-10-17 17:15:00:000	88.23	564.08	85.69	35.55	7.78
14540	2017-10-17 17:30:00:000	88.75	570.42	86.63	35.54	7.79
14541	2017-10-17 17:45:00:000	89.11	573.25	86.63	35.53	7.81
14542	2017-10-17 18:00:00:000	86.3	562.92	82.78	35.54	7.81
14543	2017-10-17 18:15:00:000	89.01	569.25	86.34	35.55	7.82
14544	2017-10-17 18:30:00:000	89.06	571.25	87.09	35.57	7.81
14545	2017-10-17 18:45:00:000	89.06	569.83	87.19	35.59	7.81
14546	2017-10-17 19:00:00:000	85.16	557.17	81.47	35.61	7.82
14547	2017-10-17 19:15:00:000	88.02	561.33	85.69	35.6	7.83
14548	2017-10-17 19:30:00:000	88.33	564.58	85.78	35.6	7.84
14549	2017-10-17 19:45:00:000	87.81	563.75	85.78	35.59	7.83
14550	2017-10-17 20:00:00:000	85.0	554.17	81.56	35.56	7.8
14551	2017-10-17 20:15:00:000	87.81	560.58	85.78	35.59	7.79
14552	2017-10-17 20:30:00:000	87.6	561.83	85.78	35.57	7.79
14553	2017-10-17 20:45:00:000	87.03	557.75	84.75	35.6	7.79
14554	2017-10-17 21:00:00:000	82.55	540.58	79.59	35.61	7.79
14555	2017-10-17 21:15:00:000	84.22	538.75	81	35.62	7.8
14556	2017-10-17 21:30:00:	83.7	536.58	81.0	35.64	7.8

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
14557	2017-10-17 21:45:00:000	83.07	531.92	81.19	35.62	7.81
14558	2017-10-17 22:00:00:000	79.74	519.33	76.03	35.61	7.81
14559	2017-10-17 22:15:00:000	82.24	524.83	79.59	35.6	7.82
14560	2017-10-17 22:30:00:000	82.5	527.58	80.72	35.58	7.82
14561	2017-10-17 22:45:00:000	83.44	533	81.19	35.53	7.81
14562	2017-10-17 23:00:00:000	82.55	533.0	79.69	35.47	7.8
14563	2017-10-17 23:15:00:000	84.84	540.75	82.41	35.4	7.79
14564	2017-10-17 23:30:00:000	86.3	549.83	84.38	35.36	7.8
14565	2017-10-17 23:45:00:000	87.14	556	85.78	35.3	7.8
14566	2017-10-18 00:00:00:000	86.51	557.0	83.25	35.24	7.8
14567	2017-10-18 00:15:00:000	90.26	573.42	87.94	35.17	7.8
14568	2017-10-18 00:30:00:000	92.24	588.33	89.91	35.07	7.8
14569	2017-10-18 00:45:00:000	93.75	598.83	91.97	35.01	7.8
14570	2017-10-18 01:00:00:000	91.41	592.08	88.31	34.95	7.8
14571	2017-10-18 01:15:00:000	95.1	605.67	93.09	34.93	7.8
14572	2017-10-18 01:30:00:000	95.36	611.08	93.66	34.91	7.8
14573	2017-10-18 01:45:00:000	95.47	610.17	93.47	34.92	7.8
14574	2017-10-18 02:00:00:000	95.73	611.08	93.56	34.91	7.8
14575	2017-10-18 02:15:00:000	95.47	610.17	93.66	34.9	7.8
14576	2017-10-18 02:30:00:	95.0	607.5	93.66	34.93	7.79

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
17717	2017-11-20 22:30:00:000	99.43	633.17	96.56	32.69	7.4
17718	2017-11-20 22:45:00:000	102.81	649.0	99.09	32.65	7.4
17719	2017-11-20 23:00:00:000	100.63	651.25	95.44	32.62	7.4
17720	2017-11-20 23:15:00:000	104.32	661.25	99.56	32.58	7.4
17721	2017-11-20 23:30:00:000	99.74	639.42	97.03	32.56	7.4
17722	2017-11-20 23:45:00:000	98.65	628.67	96.09	32.53	7.4
17723	2017-11-21 00:00:00:000	94.06	611.42	90.94	32.51	7.4
17724	2017-11-21 00:15:00:000	98.65	623.75	96.09	32.49	7.4
17725	2017-11-21 00:30:00:000	99.22	631.5	97.03	32.46	7.4
17726	2017-11-21 00:45:00:000	99.22	632.33	97.03	32.44	7.4
17727	2017-11-21 01:00:00:000	93.8	613.42	90.47	32.42	7.4
17728	2017-11-21 01:15:00:000	98.13	622.42	95.63	32.39	7.39
17729	2017-11-21 01:30:00:000	98.96	627.83	97.03	32.38	7.39
17730	2017-11-21 01:45:00:000	98.44	627.83	96.56	32.36	7.39
17731	2017-11-21 02:00:00:000	93.28	608.0	89.91	32.34	7.39
17732	2017-11-21 02:15:00:000	97.6	617.42	95.63	32.31	7.39
17733	2017-11-21 02:30:00:000	97.66	621.58	95.63	32.29	7.39
17734	2017-11-21 02:45:00:000	97.66	620.67	95.63	32.26	7.39
17735	2017-11-21 03:00:00:000	92.5	603.42	89.44	32.24	7.39
17736	2017-11-21 03:15:00:000	97.34	614.33	95.16	32.21	7.39

153 792

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
17737	2017-11-21 03:30:00:000	97.66	619.75	95.63	32.19	7.39
17738	2017-11-21 03:45:00:000	97.66	620.25	95.63	32.16	7.39
17739	2017-11-21 04:00:00:000	91.35	599.42	88.97	32.14	7.39
17740	2017-11-21 04:15:00:000	97.08	612.5	95.16	32.11	7.39
17741	2017-11-21 04:30:00:000	97.66	619.83	95.63	32.09	7.39
17742	2017-11-21 04:45:00:000	97.66	621.75	95.63	32.06	7.39
17743	2017-11-21 05:00:00:000	96.82	619.0	95.16	32.04	7.39
17744	2017-11-21 05:15:00:000	97.92	622.58	95.63	32.02	7.39
17745	2017-11-21 05:30:00:000	98.44	624.25	95.63	31.99	7.39
17746	2017-11-21 05:45:00:000	97.92	623.42	95.63	31.96	7.39
17747	2017-11-21 06:00:00:000	93.13	605.25	90.66	31.94	7.39
17748	2017-11-21 06:15:00:000	97.4	615.75	95.72	31.91	7.39
17749	2017-11-21 06:30:00:000	97.66	619.0	95.63	31.89	7.39
17750	2017-11-21 06:45:00:000	97.66	618.92	95.63	31.87	7.39
17751	2017-11-21 07:00:00:000	92.6	602.17	89.62	31.85	7.39
17752	2017-11-21 07:15:00:000	96.41	610.0	94.92	31.83	7.39
17753	2017-11-21 07:30:00:000	96.87	616.67	95.63	31.81	7.39
17754	2017-11-21 07:45:00:000	96.82	617.5	95.63	31.78	7.39
17755	2017-11-21 08:00:00:000	93.59	605.25	90.94	31.75	7.39
17756	2017-11-21 08:15:00:	96.93	614.17	95.16	31.72	7.39

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
17757	2017-11-21 08:30:00:000	96.56	616.42	95.06	31.69	7.38
17758	2017-11-21 08:45:00:000	93.13	599.5	92.34	31.67	7.38
17759	2017-11-21 09:00:00:000	84.01	557.83	82.03	31.65	7.38
17760	2017-11-21 09:15:00:000	82.55	529.67	81.09	31.64	7.37
17761	2017-11-21 09:30:00:000	78.23	503.33	76.87	31.64	7.37
17762	2017-11-21 09:45:00:000	73.7	476.58	72.84	31.63	7.37
17763	2017-11-21 10:00:00:000	70.26	458.42	68.16	31.65	7.37
17764	2017-11-21 10:15:00:000	74.79	474.25	73.78	31.67	7.37
17765	2017-11-21 10:30:00:000	77.34	492.83	76.31	31.69	7.37
17766	2017-11-21 10:45:00:000	78.8	500.5	77.72	31.72	7.37
17767	2017-11-21 11:00:00:000	75.57	493.25	73.69	31.76	7.37
17768	2017-11-21 11:15:00:000	79.58	505.42	78.75	31.78	7.36
17769	2017-11-21 11:30:00:000	80.42	514.0	79.69	31.81	7.36
17770	2017-11-21 11:45:00:000	81.2	518.58	80.25	31.84	7.36
17771	2017-11-21 12:00:00:000	77.45	506.67	75.66	31.87	7.36
17772	2017-11-21 12:15:00:000	79.69	508.42	78.19	31.89	7.36
17773	2017-11-21 12:30:00:000	80.83	518.58	80.16	31.91	7.36
17774	2017-11-21 12:45:00:000	84.84	539.33	84.28	31.93	7.36
17775	2017-11-21 13:00:00:000	83.65	542.5	81.28	31.94	7.36
17776	2017-11-21 13:15:00:	91.51	584.5	88.87	31.97	7.36

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
17777	2017-11-21 13:30:00:000	92.4	590.92	88.87	31.98	7.36
17778	2017-11-21 13:45:00:000	91.82	597.25	87.84	32.0	7.35
17779	2017-11-21 14:00:00:000	101.09	629.0	93.37	32.02	7.35
17780	2017-11-21 14:15:00:000	113.59	708.75	103.59	32.03	7.35
17781	2017-11-21 14:30:00:000	122.03	769.62	110.25	32.05	7.35
17782	2017-11-21 14:45:00:000	121.82	777.58	109.78	32.07	7.35
17783	2017-11-21 15:00:00:000	118.44	772.17	105.66	32.11	7.35
17784	2017-11-21 15:15:00:000	134.64	842.42	119.44	32.14	7.35
17785	2017-11-21 15:30:00:000	149.3	941.75	131.06	32.2	7.35
17786	2017-11-21 15:45:00:000	148.02	944.92	129.66	32.22	7.35
17787	2017-11-21 16:00:00:000	139.01	915.0	120.56	32.27	7.35
17788	2017-11-21 16:15:00:000	145.83	927.42	128.25	32.31	7.35
17789	2017-11-21 16:30:00:000	130.21	847.58	116.44	32.35	7.35
17790	2017-11-21 16:45:00:000	111.2	729.25	101.63	32.39	7.35
17791	2017-11-21 17:00:00:000	101.82	673.08	92.91	32.42	7.35
17792	2017-11-21 17:15:00:000	111.56	703.92	101.81	32.46	7.35
17793	2017-11-21 17:30:00:000	126.35	789.58	113.06	32.5	7.35
17794	2017-11-21 17:45:00:000	131.2	854.0	116.06	32.54	7.35
17795	2017-11-21 18:00:00:000	114.48	777.08	102.84	32.57	7.35
17796	2017-11-21 18:15:00:	108.59	701.33	100.41	32.61	7.35

156 (pH)(avg) 795

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
17797	2017-11-21 18:30:00:000	104.38	669.75	97.87	32.65	7.35
17798	2017-11-21 18:45:00:000	98.7	635.42	93.75	32.68	7.35
17799	2017-11-21 19:00:00:000	93.07	606.83	88.22	32.71	7.36
17800	2017-11-21 19:15:00:000	98.18	622.67	94.97	32.74	7.36
17801	2017-11-21 19:30:00:000	100.78	639.0	97.73	32.77	7.36
17802	2017-11-21 19:45:00:000	102.5	652.25	100.12	32.78	7.36
17803	2017-11-21 20:00:00:000	98.28	635.92	95.06	32.79	7.36
17804	2017-11-21 20:15:00:000	100.83	641.33	97.97	32.79	7.36
17805	2017-11-21 20:30:00:000	102.29	649.5	100.12	32.8	7.35
17806	2017-11-21 20:45:00:000	104.01	660.42	101.25	32.78	7.35
17807	2017-11-21 21:00:00:000	99.74	648.17	95.53	32.76	7.36
17808	2017-11-21 21:15:00:000	103.96	659.92	101.25	32.75	7.35
17809	2017-11-21 21:30:00:000	103.18	658.67	101.25	32.72	7.36
17810	2017-11-21 21:45:00:000	102.29	652.75	100.12	32.7	7.35
17811	2017-11-21 22:00:00:000	100.52	643.25	98.06	32.67	7.35
17812	2017-11-21 22:15:00:000	100.94	641.75	98.62	32.65	7.35
17813	2017-11-21 22:30:00:000	100.36	639.67	98.72	32.62	7.35
17814	2017-11-21 22:45:00:000	100.1	636.92	98.72	32.59	7.35
17815	2017-11-21 23:00:00:000	93.54	613.75	90.47	32.56	7.35
17816	2017-11-21 23:15:00:	98.7	625.0	96.66	32.53	7.35

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
17817	2017-11-21 23:30:00:000	99.22	631.67	97.22	32.5	7.35
17818	2017-11-21 23:45:00:000	99.27	632.92	97.03	32.48	7.35
17819	2017-11-22 00:00:00:000	94.17	613.33	90.47	32.44	7.35
17820	2017-11-22 00:15:00:000	98.44	623.33	96.56	32.42	7.35
17821	2017-11-22 00:30:00:000	99.22	628.25	97.12	32.4	7.35
17822	2017-11-22 00:45:00:000	98.44	628.25	97.12	32.37	7.35
17823	2017-11-22 01:00:00:000	92.45	604.33	90.0	32.35	7.35
17824	2017-11-22 01:15:00:000	97.34	615.67	95.16	32.33	7.35
17825	2017-11-22 01:30:00:000	97.66	619.75	95.63	32.31	7.35
17826	2017-11-22 01:45:00:000	96.77	616.67	95.63	32.29	7.35
17827	2017-11-22 02:00:00:000	91.35	595.67	89.16	32.27	7.36
17828	2017-11-22 02:15:00:000	95.62	605.25	94.22	32.26	7.36
17829	2017-11-22 02:30:00:000	95.94	610.75	94.22	32.24	7.36
17830	2017-11-22 02:45:00:000	95.99	610.75	94.22	32.23	7.36
17831	2017-11-22 03:00:00:000	89.48	587.25	87.0	32.22	7.36
17832	2017-11-22 03:15:00:000	94.84	599.42	93.75	32.2	7.36
17833	2017-11-22 03:30:00:000	95.16	605.25	94.22	32.19	7.36
17834	2017-11-22 03:45:00:000	95.16	605.25	94.22	32.17	7.36
17835	2017-11-22 04:00:00:000	90.05	585.0	87.66	32.15	7.36
17836	2017-11-22 04:15:00:	94.06	596.33	93.28	32.14	7.36

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
19197	2017-12-06 20:15:00:000	80.23	504.0	78.19	30.81	8.02
19198	2017-12-06 20:30:00:000	82.4	520.08	79.97	30.76	8.03
19199	2017-12-06 20:45:00:000	85.52	541.42	83.53	30.66	8.05
19200	2017-12-06 21:00:00:000	83.28	538.75	80.44	30.61	8.06
19201	2017-12-06 21:15:00:000	88.7	559.25	86.16	30.58	8.06
19202	2017-12-06 21:30:00:000	90.1	569.58	87.56	30.57	8.07
19203	2017-12-06 21:45:00:000	88.49	572.83	85.59	30.57	8.07
19204	2017-12-06 22:00:00:000	87.86	568.25	84.66	30.48	8.07
19205	2017-12-06 22:15:00:000	94.17	594.08	91.41	30.44	8.08
19206	2017-12-06 22:30:00:000	94.48	600.83	91.41	30.48	8.09
19207	2017-12-06 22:45:00:000	92.14	598.08	88.78	30.5	8.09
19208	2017-12-06 23:00:00:000	89.27	581.42	85.59	30.5	8.09
19209	2017-12-06 23:15:00:000	93.23	589.58	90.28	30.51	8.09
19210	2017-12-06 23:30:00:000	93.49	594.08	91.41	30.51	8.09
19211	2017-12-06 23:45:00:000	91.46	594.5	88.78	30.51	8.09
19212	2017-12-07 00:00:00:000	90.36	573.25	86.53	30.39	8.08
19213	2017-12-07 00:15:00:000	96.61	608.58	93.28	30.32	8.07
19214	2017-12-07 00:30:00:000	96.04	611.67	93.28	30.4	8.07
19215	2017-12-07 00:45:00:000	94.53	604.0	91.69	30.45	8.08
19216	2017-12-07 01:00:00:	89.22	568.67	84.94	30.45	8.08

159 798

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
19217	2017-12-07 01:15:00:000	93.18	588.5	89.72	30.44	8.07
19218	2017-12-07 01:30:00:000	93.44	592.75	91.12	30.43	8.07
19219	2017-12-07 01:45:00:000	90.94	590.75	87.0	30.43	8.07
19220	2017-12-07 02:00:00:000	88.28	561.75	85.5	30.42	8.06
19221	2017-12-07 02:15:00:000	91.72	582.12	89.58	30.42	8.06
19222	2017-12-07 02:30:00:000	92.03	585.25	89.72	30.43	8.05
19223	2017-12-07 02:45:00:000	91.72	584.0	89.72	30.46	8.05
19224	2017-12-07 03:00:00:000	90.26	578.08	87.09	30.4	8.05
19225	2017-12-07 03:15:00:000	93.49	591.75	90.66	30.26	8.05
19226	2017-12-07 03:30:00:000	96.04	609.0	93.28	30.12	8.04
19227	2017-12-07 03:45:00:000	98.02	621.67	94.78	29.97	8.03
19228	2017-12-07 04:00:00:000	94.32	610.33	90.19	29.78	8.02
19229	2017-12-07 04:15:00:000	100.57	632.58	96.84	29.75	8.01
19230	2017-12-07 04:30:00:000	101.09	643.5	97.31	29.62	7.99
19231	2017-12-07 04:45:00:000	100.31	638.92	96.84	29.59	7.98
19232	2017-12-07 05:00:00:000	97.76	623.92	94.78	29.64	7.96
19233	2017-12-07 05:15:00:000	95.83	610.33	92.81	29.63	7.94
19234	2017-12-07 05:30:00:000	94.69	603.08	91.78	29.69	7.93
19235	2017-12-07 05:45:00:000	93.75	597.67	91.22	29.74	7.92
19236	2017-12-07 06:00:00:	88.33	574.92	84.56	29.9	7.92

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
19237	2017-12-07 06:15:00:000	92.4	584.5	89.06	29.93	7.92
19238	2017-12-07 06:30:00:000	93.18	590.33	89.72	29.95	7.93
19239	2017-12-07 06:45:00:000	92.66	590.42	89.53	29.95	7.92
19240	2017-12-07 07:00:00:000	88.96	575.83	85.59	29.93	7.92
19241	2017-12-07 07:15:00:000	92.08	583.58	89.06	29.79	7.91
19242	2017-12-07 07:30:00:000	94.32	596.75	91.69	29.57	7.88
19243	2017-12-07 07:45:00:000	96.04	608.5	93.28	29.45	7.86
19244	2017-12-07 08:00:00:000	92.34	597.58	88.59	29.5	7.85
19245	2017-12-07 08:15:00:000	96.87	611.67	93.75	29.56	7.86
19246	2017-12-07 08:30:00:000	93.75	598.5	91.22	29.89	7.87
19247	2017-12-07 08:45:00:000	88.02	566.75	86.06	30.29	7.88
19248	2017-12-07 09:00:00:000	78.39	515.58	75.19	30.5	7.92
19249	2017-12-07 09:15:00:000	77.24	492.42	75.19	30.66	7.94
19250	2017-12-07 09:30:00:000	74.27	475.58	72.09	30.76	7.96
19251	2017-12-07 09:45:00:000	71.15	456.92	69.47	30.81	7.95
19252	2017-12-07 10:00:00:000	66.25	433.33	63.37	30.92	7.94
19253	2017-12-07 10:15:00:000	65.94	422.42	64.41	31.05	7.98
19254	2017-12-07 10:30:00:000	62.5	403.25	61.69	31.27	8.03
19255	2017-12-07 10:45:00:000	57.6	373.25	56.44	31.44	8.08
19256	2017-12-07 11:00:00:000	51.3	341.08	49.41	31.59	8.11

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
19257	2017-12-07 11:15:00:000	47.03	307.58	46.22	31.74	8.14
19258	2017-12-07 11:30:00:000	43.07	279.92	41.62	31.84	8.15
19259	2017-12-07 11:45:00:000	39.37	257.67	38.53	31.91	8.12
19260	2017-12-07 12:00:00:000	38.18	247.17	35.44	31.97	8.09
19261	2017-12-07 12:15:00:000	36.82	236.75	35.44	32.04	8.06
19262	2017-12-07 12:30:00:000	35.89	232.25	35.44	32.1	8.04
19263	2017-12-07 12:45:00:000	35.52	230.0	35.44	32.14	8.03
19264	2017-12-07 13:00:00:000	36.2	231.33	33.75	32.18	8.02
19265	2017-12-07 13:15:00:000	35	228.08	33.75	32.21	8.02
19266	2017-12-07 13:30:00:000	35	225.92	33.75	32.24	8.01
19267	2017-12-07 13:45:00:000	35.0	224.92	33.75	32.27	8.01
19268	2017-12-07 14:00:00:000	34.06	222.17	32.81	32.3	8.02
19269	2017-12-07 14:15:00:000	36.15	231.25	35.91	32.25	8.01
19270	2017-12-07 14:30:00:000	46.61	289.75	46.13	32.04	8
19271	2017-12-07 14:45:00:000	54.79	343.67	54.28	31.87	8.0
19272	2017-12-07 15:00:00:000	59.11	374.5	56.81	31.73	8.01
19273	2017-12-07 15:15:00:000	66.04	415.75	65.06	31.53	8.01
19274	2017-12-07 15:30:00:000	69.32	441.17	68.25	31.53	8.01
19275	2017-12-07 15:45:00:000	70.21	447.92	69.19	31.52	8.01
19276	2017-12-07 16:00:00:	67.92	442.92	65.06	31.51	8.02

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
19277	2017-12-07 16:15:00:000	71.09	453.0	69.19	31.53	8.03
19278	2017-12-07 16:30:00:000	68.49	441.67	67.69	31.71	8.06
19279	2017-12-07 16:45:00:000	62.34	405.25	61.03	31.77	8.08
19280	2017-12-07 17:00:00:000	64.58	413.17	62.53	31.48	8.06
19281	2017-12-07 17:15:00:000	73.18	461.17	71.81	31.26	8.02
19282	2017-12-07 17:30:00:000	76.25	484.75	74.91	31.19	7.98
19283	2017-12-07 17:45:00:000	75.94	485.25	74.44	31.22	7.96
19284	2017-12-07 18:00:00:000	72.34	473.42	69.75	31.2	7.97
19285	2017-12-07 18:15:00:000	76.41	484.33	74.91	31.19	7.97
19286	2017-12-07 18:30:00:000	77.55	493.92	75.38	31.19	7.98
19287	2017-12-07 18:45:00:000	78.59	500.25	77.06	31.16	7.99
19288	2017-12-07 19:00:00:000	75.83	491.67	72.84	31.1	7.99
19289	2017-12-07 19:15:00:000	79.22	502.5	77.06	31.1	7.98
19290	2017-12-07 19:30:00:000	78.7	503.42	77.06	31.12	7.98
19291	2017-12-07 19:45:00:000	78.75	501.75	77.06	31.14	7.98
19292	2017-12-07 20:00:00:000	75.05	489.0	72.56	31.14	7.98
19293	2017-12-07 20:15:00:000	78.44	496.67	76.5	31.2	8.0
19294	2017-12-07 20:30:00:000	78.44	499.33	76.59	31.17	8.01
19295	2017-12-07 20:45:00:000	80.36	509.83	78.19	31.05	8.01
19296	2017-12-07 21:00:00:	78.44	507.58	75.66	30.99	8.01

163 (pH)(avg) 802

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
19297	2017-12-07 21:15:00:000	82.45	523	80.16	30.96	8.01
19298	2017-12-07 21:30:00:000	82.97	529.0	81.84	30.94	8.01
19299	2017-12-07 21:45:00:000	83.65	531.67	81.84	30.89	8.01
19300	2017-12-07 22:00:00:000	79.32	517.75	76.22	30.89	8.01
19301	2017-12-07 22:15:00:000	83.44	527.17	81.28	30.87	8
19302	2017-12-07 22:30:00:000	84.01	533.17	81.84	30.84	8
19303	2017-12-07 22:45:00:000	83.98	534.5	81.84	30.82	8
19304	2017-12-07 23:00:00:000	82.5	529.5	80.34	30.81	8
19305	2017-12-07 23:15:00:000	83.13	529.92	81.84	30.8	8.0
19306	2017-12-07 23:30:00:000	84.06	532.75	81.84	30.77	7.99
19307	2017-12-07 23:45:00:000	83.96	533.25	81.84	30.76	7.99
19308	2017-12-08 00:00:00:000	79.38	518.25	76.13	30.73	7.99
19309	2017-12-08 00:15:00:000	84.84	535.42	82.31	30.45	7.98
19310	2017-12-08 00:30:00:000	87.4	554.0	85.41	30.34	7.97
19311	2017-12-08 00:45:00:000	88.8	565.33	86.44	30.33	7.98
19312	2017-12-08 01:00:00:000	85.68	553.92	81.84	30.47	7.98
19313	2017-12-08 01:15:00:000	89.43	565.25	86.44	30.49	8.0
19314	2017-12-08 01:30:00:000	90	572.08	88.03	30.5	8.02
19315	2017-12-08 01:45:00:000	90.0	572.08	88.03	30.49	8.03
19316	2017-12-08 02:00:00:000	84.32	553.17	80.81	30.55	8.03

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
22897	2018-01-16 20:30:00:000	88.91	568.0	87.84	29.61	8.22
22898	2018-01-16 20:45:00:000	88.75	565.58	86.91	29.62	8.22
22899	2018-01-16 21:00:00:000	83.91	548.5	81.28	29.62	8.22
22900	2018-01-16 21:15:00:000	86.41	550.67	84.75	29.59	8.2
22901	2018-01-16 21:30:00:000	86.15	549.33	84.66	29.55	8.2
22902	2018-01-16 21:45:00:000	84.17	543.5	83.16	29.55	8.19
22903	2018-01-16 22:00:00:000	82.14	530.33	80.25	29.57	8.18
22904	2018-01-16 22:15:00:000	82.5	526.33	81.84	29.57	8.17
22905	2018-01-16 22:30:00:000	82.19	525.83	81.84	29.58	8.17
22906	2018-01-16 22:45:00:000	82.19	527.67	80.81	29.57	8.18
22907	2018-01-16 23:00:00:000	82.55	528.58	80.81	29.53	8.2
22908	2018-01-16 23:15:00:000	87.34	551.33	86.53	29.43	8.22
22909	2018-01-16 23:30:00:000	91.56	578.42	89.91	29.37	8.24
22910	2018-01-16 23:45:00:000	95.05	602.0	92.53	29.41	8.26
22911	2018-01-17 00:00:00:000	90.83	591.17	87.94	29.4	8.26
22912	2018-01-17 00:15:00:000	95.0	601.58	92.72	29.42	8.26
22913	2018-01-17 00:30:00:000	94.74	603.42	92.62	29.43	8.26
22914	2018-01-17 00:45:00:000	93.59	597.5	91.5	29.45	8.25
22915	2018-01-17 01:00:00:000	87.97	576.25	85.5	29.44	8.24
22916	2018-01-17 01:15:00:	91.04	578.58	89.44	29.44	8.24

165 (pH)(avg) 804

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH(a)
	000					
22917	2018-01-17 01:30:00:000	90.52	577.67	89.53	29.44	8.23
22918	2018-01-17 01:45:00:000	88.28	571.75	86.44	29.43	8.23
22919	2018-01-17 02:00:00:000	86.04	556.83	84.47	29.38	8.21
22920	2018-01-17 02:15:00:000	87.45	556.75	86.63	29.37	8.2
22921	2018-01-17 02:30:00:000	87.5	554.92	86.63	29.38	8.19
22922	2018-01-17 02:45:00:000	84.58	550.33	84.0	29.37	8.18
22923	2018-01-17 03:00:00:000	81.72	534.17	80.25	29.38	8.17
22924	2018-01-17 03:15:00:000	85.47	540.83	84.94	29.4	8.18
22925	2018-01-17 03:30:00:000	85.78	544.5	84.94	29.43	8.2
22926	2018-01-17 03:45:00:000	85.26	550.0	84.56	29.43	8.23
22927	2018-01-17 04:00:00:000	85.47	549.58	82.97	29.39	8.25
22928	2018-01-17 04:15:00:000	92.6	581.83	91.22	29.33	8.27
22929	2018-01-17 04:30:00:000	97.14	612.75	95.34	29.23	8.27
22930	2018-01-17 04:45:00:000	99.48	629.83	97.41	29.19	8.27
22931	2018-01-17 05:00:00:000	96.04	620.42	92.81	29.15	8.27
22932	2018-01-17 05:15:00:000	100.83	638.5	98.53	29.14	8.26
22933	2018-01-17 05:30:00:000	102.34	647.08	99.47	29.09	8.26
22934	2018-01-17 05:45:00:000	100.68	650.75	97.87	29.08	8.25
22935	2018-01-17 06:00:00:000	97.45	634.0	94.88	29.06	8.24
22936	2018-01-17 06:15:00:	100.57	636.58	99	29.07	8.23

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
22937	2018-01-17 06:30:00:000	100.57	639.75	99.0	29.0	8.22
22938	2018-01-17 06:45:00:000	101.98	645.67	100.41	28.87	8.21
22939	2018-01-17 07:00:00:000	98.59	638.5	95.81	28.8	8.2
22940	2018-01-17 07:15:00:000	102.03	646.25	100.41	28.74	8.18
22941	2018-01-17 07:30:00:000	102.03	647.5	101.25	28.68	8.11
22942	2018-01-17 07:45:00:000	35.47	299.25	35.72	28.65	8.1
22943	2018-01-17 08:00:00:000	21.8	159.25	22.08	30.23	8.17
22944	2018-01-17 08:15:00:000	76.33	429.75	75.8	32.16	8.19
22945	2018-01-17 08:30:00:000	83.91	525.83	83.34	32.78	8.18
22946	2018-01-17 08:45:00:000	77.86	501.25	77.63	33.84	8.17
22947	2018-01-17 09:00:00:000	70.62	471.75	69.47	34.28	8.16
22948	2018-01-17 09:15:00:000	68.44	440.92	68.91	34.34	8.15
22949	2018-01-17 09:30:00:000	66.46	426.83	66.84	34.29	8.14
22950	2018-01-17 09:45:00:000	65.26	418.25	65.81	34.3	8.13
22951	2018-01-17 10:00:00:000	59.32	392.42	59.16	35.49	8.13
22952	2018-01-17 10:15:00:000	58.49	374.25	59.16	35.83	8.11
22953	2018-01-17 10:30:00:000	58.98	376.5	59.34	36.29	8.12
22954	2018-01-17 10:45:00:000	54.77	356.25	53.86	34.95	8.19
22955	2018-01-17 11:00:00:000	55.08	351.25	54.7	34.33	8.2
22956	2018-01-17 11:15:00:	56.41	358.75	56.34	33.71	8.2

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
22957	2018-01-17 11:30:00:000	55.78	358.33	55.41	32.9	8.21
22958	2018-01-17 11:45:00:000	54.95	353.25	54.84	32.31	8.22
22959	2018-01-17 12:00:00:000	52.81	343.17	51.84	31.9	8.2
22960	2018-01-17 12:15:00:000	52.55	337.75	52.31	31.56	8.19
22961	2018-01-17 12:30:00:000	51.46	331.5	51.28	31.29	8.16
22962	2018-01-17 12:45:00:000	50.26	324.17	50.16	31.08	8.13
22963	2018-01-17 13:00:00:000	48.59	316.92	47.53	30.93	8.1
22964	2018-01-17 13:15:00:000	48.59	311.42	47.53	30.88	8.09
22965	2018-01-17 13:30:00:000	47.66	308.25	47.53	30.86	8.08
22966	2018-01-17 13:45:00:000	48.23	308.67	48.0	30.81	8.1
22967	2018-01-17 14:00:00:000	55.62	344.92	54.19	30.61	8.2
22968	2018-01-17 14:15:00:000	64.95	409.58	64.87	30.45	8.22
22969	2018-01-17 14:30:00:000	70.31	446.0	70.03	30.33	8.23
22970	2018-01-17 14:45:00:000	73.75	469.5	73.03	30.22	8.22
22971	2018-01-17 15:00:00:000	72.24	470.83	70.97	30.13	8.22
22972	2018-01-17 15:15:00:000	76.95	489.75	76.64	30.08	8.22
22973	2018-01-17 15:30:00:000	78.54	499.83	78.19	30.01	8.22
22974	2018-01-17 15:45:00:000	79.11	506.75	78.19	29.96	8.22
22975	2018-01-17 16:00:00:000	75.78	496.25	74.72	29.94	8.22
22976	2018-01-17 16:15:00:	78.91	504.58	78.19	29.89	8.22

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
22977	2018-01-17 16:30:00:000	79.53	509.08	79.31	29.88	8.24
22978	2018-01-17 16:45:00:000	79.84	509.08	79.87	29.86	8.24
22979	2018-01-17 17:00:00:000	76.67	500.5	75.19	29.82	8.24
22980	2018-01-17 17:15:00:000	80.68	512.67	80.44	29.79	8.24
22981	2018-01-17 17:30:00:000	80.94	518.58	81.0	29.78	8.24
22982	2018-01-17 17:45:00:000	80.78	516.5	79.97	29.8	8.25
22983	2018-01-17 18:00:00:000	76.46	500.17	74.81	29.81	8.26
22984	2018-01-17 18:15:00:000	79.9	509.25	79.59	29.81	8.26
22985	2018-01-17 18:30:00:000	80.83	514.75	80.16	29.81	8.26
22986	2018-01-17 18:45:00:000	80.31	513.5	80.16	29.77	8.24
22987	2018-01-17 19:00:00:000	78.07	506.67	77.53	29.74	8.24
22988	2018-01-17 19:15:00:000	81.77	519.33	81.66	29.66	8.23
22989	2018-01-17 19:30:00:000	85.57	542.58	85.22	29.57	8.23
22990	2018-01-17 19:45:00:000	87.86	563.83	86.72	29.56	8.24
22991	2018-01-17 20:00:00:000	87.6	563.0	85.88	29.59	8.25
22992	2018-01-17 20:15:00:000	89.84	569.83	88.03	29.61	8.25
22993	2018-01-17 20:30:00:000	89.84	569.75	88.03	29.62	8.26
22994	2018-01-17 20:45:00:000	89.06	568.92	88.03	29.61	8.26
22995	2018-01-17 21:00:00:000	85.31	555.33	83.25	29.51	8.24
22996	2018-01-17 21:15:00:	89.84	568.5	88.73	29.41	8.23

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH(avg)
	000					
22997	2018-01-17 21:30:00:000	92.76	588.0	91.5	29.29	8.22
22998	2018-01-17 21:45:00:000	97.97	620.25	96.33	29.25	8.23
22999	2018-01-17 22:00:00:000	99.69	627.75	95.77	29.21	8.24
23000	2018-01-17 22:15:00:000	107.42	677.37	103.36	29.24	8.26
23001	2018-01-17 22:30:00:000	108.75	690.08	104.44	29.36	8.28
23002	2018-01-17 22:45:00:000	107.55	684.58	102.94	29.47	8.3
23003	2018-01-17 23:00:00:000	98.85	650.25	93.19	29.52	8.31
23004	2018-01-17 23:15:00:000	103.44	654.25	99	29.56	8.31
23005	2018-01-17 23:30:00:000	104.01	659.25	99.0	29.52	8.31
23006	2018-01-17 23:45:00:000	104.84	664.83	100.5	29.41	8.29
23007	2018-01-18 00:00:00:000	101.2	654.83	95.81	29.39	8.29
23008	2018-01-18 00:15:00:000	105.73	669.33	101.44	29.45	8.3
23009	2018-01-18 00:30:00:000	105.16	669.83	100.97	29.5	8.3
23010	2018-01-18 00:45:00:000	104.64	666.58	100.41	29.51	8.3
23011	2018-01-18 01:00:00:000	97.81	640.0	92.81	29.52	8.3
23012	2018-01-18 01:15:00:000	102.97	649.42	98.53	29.51	8.29
23013	2018-01-18 01:30:00:000	102.4	650.83	99	29.51	8.29
23014	2018-01-18 01:45:00:000	102.97	652.58	99.0	29.5	8.28
23015	2018-01-18 02:00:00:000	96.98	629.58	92.44	29.49	8.28
23016	2018-01-18 02:15:00:	101.56	641.33	97.59	29.47	8.27

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
24957	2018-02-07 20:00:00:000	74.58	479.42	73.31	28.07	8.15
24958	2018-02-07 20:15:00:000	78.91	498.92	78.56	28.06	8.16
24959	2018-02-07 20:30:00:000	83.75	529.75	83.16	28.05	8.17
24960	2018-02-07 20:45:00:000	88.02	560.58	86.72	28.05	8.17
24961	2018-02-07 21:00:00:000	90.31	575.08	88.78	28.05	8.16
24962	2018-02-07 21:15:00:000	95.16	603.75	93.94	28.06	8.14
24963	2018-02-07 21:30:00:000	96.56	615.0	95.63	28.07	8.14
24964	2018-02-07 21:45:00:000	95.1	617.42	93.0	28.06	8.12
24965	2018-02-07 22:00:00:000	92.34	601.58	89.91	28.05	8.09
24966	2018-02-07 22:15:00:000	94.9	601.83	93.94	28.07	8.06
24967	2018-02-07 22:30:00:000	94.38	602.25	94.13	28.1	8.01
24968	2018-02-07 22:45:00:000	93.28	603.75	92.06	28.11	7.97
24969	2018-02-07 23:00:00:000	91.04	592	89.44	28.11	7.95
24970	2018-02-07 23:15:00:000	94.17	598.0	93.66	28.09	7.95
24971	2018-02-07 23:30:00:000	94.22	599.75	94.22	28.09	7.95
24972	2018-02-07 23:45:00:000	93.33	599.75	92.62	28.09	7.96
24973	2018-02-08 00:00:00:000	93.02	591.17	92.53	28.11	7.96
24974	2018-02-08 00:15:00:000	96.98	613.42	96.19	28.21	7.96
24975	2018-02-08 00:30:00:000	102.4	646.08	101.34	28.24	7.97
24976	2018-02-08 00:45:00:	99.58	648.0	97.87	28.07	8.02

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
24977	2018-02-08 01:00:00:000	96.51	613.92	94.69	27.96	8.06
24978	2018-02-08 01:15:00:000	64.95	461.17	61.97	27.8	8.19
24979	2018-02-08 01:30:00:000	19.22	156.42	16.88	27.6	8.38
24980	2018-02-08 01:45:00:000	16.72	113	14.34	27.65	8.38
24981	2018-02-08 02:00:00:000	33.49	185.0	30.66	27.71	8.27
24982	2018-02-08 02:15:00:000	86.61	500.17	84.47	27.77	8.16
24983	2018-02-08 02:30:00:000	99.22	618.08	96.84	27.8	8.1
24984	2018-02-08 02:45:00:000	97.5	633.42	95.81	27.82	8.05
24985	2018-02-08 03:00:00:000	95.16	604.92	94.22	27.81	8.01
24986	2018-02-08 03:15:00:000	98.59	624.42	97.88	27.8	7.98
24987	2018-02-08 03:30:00:000	99.17	628.0	99.0	27.78	7.97
24988	2018-02-08 03:45:00:000	97.24	629.92	95.91	27.78	7.96
24989	2018-02-08 04:00:00:000	95.16	604.58	94.31	27.76	7.95
24990	2018-02-08 04:15:00:000	99.22	627.58	98.44	27.73	7.94
24991	2018-02-08 04:30:00:000	99.53	633.25	99	27.71	7.93
24992	2018-02-08 04:45:00:000	100.31	635.42	99.0	27.69	7.92
24993	2018-02-08 05:00:00:000	94.37	614.58	92.34	27.65	7.92
24994	2018-02-08 05:15:00:000	99.48	627.17	98.53	27.6	7.92
24995	2018-02-08 05:30:00:000	100.78	638.12	100.55	27.56	7.93
24996	2018-02-08 05:45:00:	101.56	645.0	100.97	27.53	7.93

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
24997	2018-02-08 06:00:00:000	98.7	637.75	96.84	27.49	7.96
24998	2018-02-08 06:15:00:000	104.38	658.0	103.03	27.45	7.93
24999	2018-02-08 06:30:00:000	105.47	667.25	104.06	27.37	7.9
25000	2018-02-08 06:45:00:000	105.47	668.08	104.63	27.31	7.85
25001	2018-02-08 07:00:00:000	98.39	645.0	95.91	27.29	7.81
25002	2018-02-08 07:15:00:000	103.85	656.25	103.03	27.28	7.79
25003	2018-02-08 07:30:00:000	103.91	659.5	103.5	27.3	7.79
25004	2018-02-08 07:45:00:000	103.85	657.67	103.5	27.33	7.78
25005	2018-02-08 08:00:00:000	98.07	636.75	95.25	27.36	7.76
25006	2018-02-08 08:15:00:000	101.98	645.75	101.34	27.38	7.75
25007	2018-02-08 08:30:00:000	101.04	642.42	99.84	27.52	7.75
25008	2018-02-08 08:45:00:000	96.61	630.0	95.44	27.64	7.76
25009	2018-02-08 09:00:00:000	91.72	586.42	90.28	27.61	7.79
25010	2018-02-08 09:15:00:000	92.19	590.0	92.25	27.62	7.79
25011	2018-02-08 09:30:00:000	90.26	579.17	90.37	27.63	7.79
25012	2018-02-08 09:45:00:000	86.25	562.83	85.69	27.63	7.79
25013	2018-02-08 10:00:00:000	80.0	516.17	78.56	27.53	7.87
25014	2018-02-08 10:15:00:000	70.62	460.83	70.88	27.42	8.11
25015	2018-02-08 10:30:00:000	62.6	408.58	62.62	27.44	8.23
25016	2018-02-08 10:45:00:	57.5	375.92	56.91	27.47	8.31

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
25017	2018-02-08 11:00:00:000	58.85	375.92	57.84	27.63	8.23
25018	2018-02-08 11:15:00:000	65.42	413.0	65.06	27.92	8.15
25019	2018-02-08 11:30:00:000	69.58	442.92	69.19	28.11	8.13
25020	2018-02-08 11:45:00:000	69.53	452.42	69.0	28.27	8.13
25021	2018-02-08 12:00:00:000	68.75	439.67	67.5	28.38	8.1
25022	2018-02-08 12:15:00:000	69.84	446.0	69.09	28.43	8.11
25023	2018-02-08 12:30:00:000	70.36	448.67	70.03	28.53	8.08
25024	2018-02-08 12:45:00:000	70.26	456	69.47	28.65	8.05
25025	2018-02-08 13:00:00:000	71.41	455.0	70.41	28.75	8.01
25026	2018-02-08 13:15:00:000	75.23	478.75	75.09	28.83	7.99
25027	2018-02-08 13:30:00:000	76.51	487.17	76.78	28.9	7.99
25028	2018-02-08 13:45:00:000	76.46	490.42	76.78	28.96	7.97
25029	2018-02-08 14:00:00:000	71.09	469.0	70.03	28.96	7.98
25030	2018-02-08 14:15:00:000	71.67	459.92	72.0	28.92	8.0
25031	2018-02-08 14:30:00:000	71.09	456.33	71.53	28.89	8.01
25032	2018-02-08 14:45:00:000	71.09	456.25	72.0	28.84	8.01
25033	2018-02-08 15:00:00:000	66.77	438.67	66.28	28.76	8.01
25034	2018-02-08 15:15:00:000	68.75	440.42	68.91	28.67	8.01
25035	2018-02-08 15:30:00:000	68.8	443.5	68.72	28.59	8
25036	2018-02-08 15:45:00:	68.91	443.08	68.72	28.54	8.0

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
25037	2018-02-08 16:00:00:000	67.19	436.42	66.84	28.49	7.98
25038	2018-02-08 16:15:00:000	69.43	444.08	68.91	28.39	7.98
25039	2018-02-08 16:30:00:000	68.28	439.58	68.91	28.3	7.98
25040	2018-02-08 16:45:00:000	66.04	432.83	65.91	28.2	7.99
25041	2018-02-08 17:00:00:000	61.25	397.08	60.75	28.1	8.02
25042	2018-02-08 17:15:00:000	63.28	404.75	63.38	28.07	8.02
25043	2018-02-08 17:30:00:000	65.0	415.58	65.34	28.04	8.03
25044	2018-02-08 17:45:00:000	65.26	422.0	65.34	28.03	8.03
25045	2018-02-08 18:00:00:000	65.57	420.67	65.53	28.04	8.03
25046	2018-02-08 18:15:00:000	66.98	428.0	66.66	28.03	8.03
25047	2018-02-08 18:30:00:000	67.97	435.25	68.25	28.05	8.02
25048	2018-02-08 18:45:00:000	68.54	436.67	68.72	28.05	8.02
25049	2018-02-08 19:00:00:000	69.11	442.25	69.19	28.06	8.02
25050	2018-02-08 19:15:00:000	68.59	439.92	68.72	28.05	8.02
25051	2018-02-08 19:30:00:000	68.75	437.33	68.81	28.05	8.02
25052	2018-02-08 19:45:00:000	68.8	440.08	68.44	28.05	8.01
25053	2018-02-08 20:00:00:000	67.97	431.83	67.31	28.01	8.03
25054	2018-02-08 20:15:00:000	69.11	439.25	69.47	27.98	8.05
25055	2018-02-08 20:30:00:000	71.09	451.08	71.06	27.98	8.06
25056	2018-02-08 20:45:00:	73.2	463.0	72.56	28.0	8.06

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
25057	2018-02-08 21:00:00:000	70.83	459.25	69.56	28.01	8.05
25058	2018-02-08 21:15:00:000	74.01	469.17	73.69	28.01	8.04
25059	2018-02-08 21:30:00:000	73.75	471.17	74.25	28.02	8.04
25060	2018-02-08 21:45:00:000	73.23	467.0	72.75	28.05	8.01
25061	2018-02-08 22:00:00:000	68.7	450.25	67.13	28.06	7.99
25062	2018-02-08 22:15:00:000	71.82	454.83	71.72	28.06	7.98
25063	2018-02-08 22:30:00:000	72.71	461.17	72.84	28.05	7.98
25064	2018-02-08 22:45:00:000	71.25	456.25	72.28	28.04	7.97
25065	2018-02-08 23:00:00:000	69.32	449.83	68.72	28.07	7.94
25066	2018-02-08 23:15:00:000	74.69	472.08	75.19	28.09	7.92
25067	2018-02-08 23:30:00:000	76.72	485.25	76.78	28.13	7.91
25068	2018-02-08 23:45:00:000	78.12	494.83	78.47	28.13	7.92
25069	2018-02-09 00:00:00:000	75.36	487.92	73.87	28.1	7.97
25070	2018-02-09 00:15:00:000	79.9	505.67	79.5	28.09	8.0
25071	2018-02-09 00:30:00:000	82.19	519.33	80.91	28.07	8.04
25072	2018-02-09 00:45:00:000	83.28	528.92	82.12	28.03	8.07
25073	2018-02-09 01:00:00:000	80.47	518.5	77.91	28.01	8.1
25074	2018-02-09 01:15:00:000	85.36	538.42	83.72	28.03	8.11
25075	2018-02-09 01:30:00:000	86.2	547.92	85.22	28.08	8.1
25076	2018-02-09 01:45:00:	87.66	554.75	86.63	28.1	8.09

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
28317	2018-03-14 21:45:00:000	99.69	637.42	98.44	32.03	8.31
28318	2018-03-14 22:00:00:000	95.42	624.17	92.62	32.01	8.31
28319	2018-03-14 22:15:00:000	100.47	638.33	98.16	31.99	8.32
28320	2018-03-14 22:30:00:000	101.35	646.0	99.84	31.97	8.32
28321	2018-03-14 22:45:00:000	101.87	650.5	99.84	31.91	8.31
28322	2018-03-14 23:00:00:000	97.66	636.92	94.69	31.85	8.31
28323	2018-03-14 23:15:00:000	103.12	653.25	100.78	31.78	8.31
28324	2018-03-14 23:30:00:000	104.22	665.08	102.94	31.72	8.3
28325	2018-03-14 23:45:00:000	105.1	670.08	102.94	31.67	8.3
28326	2018-03-15 00:00:00:000	105.63	673.75	104.06	31.65	8.31
28327	2018-03-15 00:15:00:000	105.99	676.0	104.63	31.62	8.31
28328	2018-03-15 00:30:00:000	106.56	680.58	104.63	31.56	8.31
28329	2018-03-15 00:45:00:000	107.34	683.33	105.56	31.55	8.31
28330	2018-03-15 01:00:00:000	102.03	666.0	98.34	31.55	8.32
28331	2018-03-15 01:15:00:000	106.88	678.33	104.63	31.54	8.32
28332	2018-03-15 01:30:00:000	107.45	685.5	106.03	31.53	8.33
28333	2018-03-15 01:45:00:000	106.93	686.58	105.09	31.53	8.33
28334	2018-03-15 02:00:00:000	106.61	682.92	104.16	31.51	8.33
28335	2018-03-15 02:15:00:000	108.12	687.5	106.03	31.49	8.33
28336	2018-03-15 02:30:00:000	108.44	690.67	106.03	31.46	8.34

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
28337	2018-03-15 02:45:00:000	108.7	693.25	106.03	31.44	8.34
28338	2018-03-15 03:00:00:000	104.17	677.0	100.03	31.42	8.34
28339	2018-03-15 03:15:00:000	109.22	693.83	106.59	31.37	8.35
28340	2018-03-15 03:30:00:000	111.3	706.08	108.84	31.3	8.35
28341	2018-03-15 03:45:00:000	112.4	715.67	109.87	31.26	8.35
28342	2018-03-15 04:00:00:000	111.04	713.83	107.72	31.2	8.35
28343	2018-03-15 04:15:00:000	83.44	579.25	81.09	31.16	8.36
28344	2018-03-15 04:30:00:000	20.31	182.83	18.66	31.14	8.36
28345	2018-03-15 04:45:00:000	8.7	72.75	8.34	31.11	8.35
28346	2018-03-15 05:00:00:000	36.82	197.42	36.0	31.04	8.34
28347	2018-03-15 05:15:00:000	107.66	624.67	104.81	31.01	8.33
28348	2018-03-15 05:30:00:000	116.25	730.75	113.91	31.02	8.31
28349	2018-03-15 05:45:00:000	114.48	731.17	112.5	31.02	8.28
28350	2018-03-15 06:00:00:000	113.07	723.5	110.91	31.01	8.25
28351	2018-03-15 06:15:00:000	112.55	717.17	111	31.01	8.22
28352	2018-03-15 06:30:00:000	112.03	715.25	111.0	31.0	8.19
28353	2018-03-15 06:45:00:000	111.72	712.17	109.41	30.99	8.17
28354	2018-03-15 07:00:00:000	106.04	690.75	103.22	30.97	8.16
28355	2018-03-15 07:15:00:000	109.11	693.08	107.25	30.94	8.15
28356	2018-03-15 07:30:00:	109.37	694.92	107.72	30.93	8.14

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
28357	2018-03-15 07:45:00:000	91.09	611.83	88.69	30.87	8.14
28358	2018-03-15 08:00:00:000	21.56	273.08	21.09	30.81	8.15
28359	2018-03-15 08:15:00:000	80.42	457.5	78.84	30.84	8.18
28360	2018-03-15 08:30:00:000	99.9	623.33	98.81	31.12	8.28
28361	2018-03-15 08:45:00:000	92.6	607.42	90.56	31.43	8.31
28362	2018-03-15 09:00:00:000	84.84	563.92	82.97	31.62	8.3
28363	2018-03-15 09:15:00:000	83.12	536.17	82.5	31.76	8.29
28364	2018-03-15 09:30:00:000	79.22	511.83	78.28	31.86	8.26
28365	2018-03-15 09:45:00:000	72.92	480.5	72.19	32.1	8.25
28366	2018-03-15 10:00:00:000	67.19	446.75	65.81	32.28	8.23
28367	2018-03-15 10:15:00:000	64.9	419.67	64.31	32.44	8.23
28368	2018-03-15 10:30:00:000	61.46	397.33	60.19	32.57	8.22
28369	2018-03-15 10:45:00:000	57.14	376.0	57.09	32.67	8.2
28370	2018-03-15 11:00:00:000	54.22	356.92	52.41	32.75	8.18
28371	2018-03-15 11:15:00:000	53.12	344.75	52.31	32.82	8.16
28372	2018-03-15 11:30:00:000	51.87	338.0	51.75	32.86	8.15
28373	2018-03-15 11:45:00:000	51.3	332.42	49.87	32.9	8.15
28374	2018-03-15 12:00:00:000	50.0	327.5	48.28	32.96	8.16
28375	2018-03-15 12:15:00:000	49.95	325.25	48.75	33.02	8.17
28376	2018-03-15 12:30:00:	49.84	324.67	49.22	33.07	8.18

179 818

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH(avg)
	000					
28377	2018-03-15 12:45:00:000	49.48	324.58	48.66	33.11	8.19
28378	2018-03-15 13:00:00:000	49.22	321.5	47.53	33.14	8.19
28379	2018-03-15 13:15:00:000	49.74	323.58	48.66	33.16	8.2
28380	2018-03-15 13:30:00:000	49.69	324.08	48.66	33.17	8.19
28381	2018-03-15 13:45:00:000	49.69	324.08	48.09	33.18	8.16
28382	2018-03-15 14:00:00:000	49.17	320.08	47.53	33.19	8.13
28383	2018-03-15 14:15:00:000	48.91	316.83	48.66	33.17	8.14
28384	2018-03-15 14:30:00:000	48.91	317.25	48.56	33.15	8.14
28385	2018-03-15 14:45:00:000	49.43	320.5	47.91	33.14	8.14
28386	2018-03-15 15:00:00:000	50.26	323.58	48.09	33.06	8.13
28387	2018-03-15 15:15:00:000	60.21	378.08	58.78	32.85	8.13
28388	2018-03-15 15:30:00:000	68.18	431.0	67.03	32.69	8.12
28389	2018-03-15 15:45:00:000	71.88	461.42	70.97	32.6	8.12
28390	2018-03-15 16:00:00:000	73.59	470.42	72.09	32.53	8.13
28391	2018-03-15 16:15:00:000	76.72	490.0	75.75	32.44	8.14
28392	2018-03-15 16:30:00:000	78.18	500.5	77.16	32.37	8.15
28393	2018-03-15 16:45:00:000	78.39	510.0	76.13	32.27	8.14
28394	2018-03-15 17:00:00:000	78.39	502.67	76.12	32.18	8.12
28395	2018-03-15 17:15:00:000	81.2	519.92	80.34	32.1	8.11
28396	2018-03-15 17:30:00:000	81.25	522.75	81.0	32.02	8.09

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
28397	2018-03-15 17:45:00:000	79.53	521.33	78.84	31.96	8.07
28398	2018-03-15 18:00:00:000	77.66	500.5	76.31	31.92	8.06
28399	2018-03-15 18:15:00:000	80.62	514.67	80.06	31.91	8.05
28400	2018-03-15 18:30:00:000	80.62	517.25	81.0	31.88	8.04
28401	2018-03-15 18:45:00:000	80.0	520.17	78.94	31.83	8.03
28402	2018-03-15 19:00:00:000	79.48	508.83	78.0	31.82	8.04
28403	2018-03-15 19:15:00:000	82.97	528.33	82.13	31.8	8.06
28404	2018-03-15 19:30:00:000	84.38	538.83	84.38	31.83	8.07
28405	2018-03-15 19:45:00:000	83.59	544.33	82.31	31.83	8.08
28406	2018-03-15 20:00:00:000	82.45	527.5	80.81	31.85	8.08
28407	2018-03-15 20:15:00:000	85.16	544.83	84.38	31.88	8.08
28408	2018-03-15 20:30:00:000	85.16	545.83	84.38	31.92	8.08
28409	2018-03-15 20:45:00:000	83.8	542.75	82.88	31.93	8.08
28410	2018-03-15 21:00:00:000	82.34	526.33	81.0	31.94	8.07
28411	2018-03-15 21:15:00:000	83.59	534.17	82.97	31.96	8.07
28412	2018-03-15 21:30:00:000	83.85	536.42	82.97	31.95	8.08
28413	2018-03-15 21:45:00:000	83.59	541.92	82.59	31.89	8.1
28414	2018-03-15 22:00:00:000	85.31	541.0	83.06	31.81	8.11
28415	2018-03-15 22:15:00:000	90.47	576.25	89.16	31.78	8.11
28416	2018-03-15 22:30:00:000	91.09	578.58	89.16	31.76	8.11

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
28417	2018-03-15 22:45:00:000	91.41	582.5	90.0	31.74	8.11
28418	2018-03-15 23:00:00:000	88.28	563.62	86.2	31.75	8.12
28419	2018-03-15 23:15:00:000	93.33	590.92	91.22	31.71	8.11
28420	2018-03-15 23:30:00:000	97.24	617.17	94.88	31.67	8.11
28421	2018-03-15 23:45:00:000	100.68	639.5	97.97	31.54	8.09
28422	2018-03-16 00:00:00:000	96.41	636.38	92.25	31.51	8.1
28423	2018-03-16 00:15:00:000	100.78	638.58	97.97	31.52	8.11
28424	2018-03-16 00:30:00:000	99.53	636.75	97.03	31.5	8.11
28425	2018-03-16 00:45:00:000	98.96	632.25	97.03	31.46	8.1
28426	2018-03-16 01:00:00:000	93.39	611.33	90.19	31.48	8.11
28427	2018-03-16 01:15:00:000	95.31	606.83	93.19	31.49	8.12
28428	2018-03-16 01:30:00:000	93.8	599.92	92.25	31.51	8.13
28429	2018-03-16 01:45:00:000	90.42	591.75	89.25	31.51	8.13
28430	2018-03-16 02:00:00:000	88.12	562.67	85.5	31.54	8.14
28431	2018-03-16 02:15:00:000	90.05	573.08	89.16	31.59	8.15
28432	2018-03-16 02:30:00:000	89.01	569.08	87.47	31.58	8.16
28433	2018-03-16 02:45:00:000	86.72	565.5	85.03	31.58	8.16
28434	2018-03-16 03:00:00:000	84.43	539.08	82.5	31.56	8.15
28435	2018-03-16 03:15:00:000	87.92	558.67	87.0	31.56	8.16
28436	2018-03-16 03:30:00:000	87.92	561.33	87.56	31.54	8.17

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S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
32397	2018-04-27 00:00:00:000	220.89	1327.75	199.31	34.69	8.02
32398	2018-04-27 00:15:00:000	220.57	1311.83	199.03	34.36	8.06
32399	2018-04-27 00:30:00:000	134.43	860.25	119.16	34.55	8.18
32400	2018-04-27 00:45:00:000	111.98	682.5	110.34	34.75	8.28
32401	2018-04-27 01:00:00:000	96.35	591.92	97.59	34.85	8.34
32402	2018-04-27 01:15:00:000	90.05	536.58	94.22	34.88	8.37
32403	2018-04-27 01:30:00:000	87.86	519.33	91.41	34.89	8.37
32404	2018-04-27 01:45:00:000	86.46	510.75	90.28	34.93	8.37
32405	2018-04-27 02:00:00:000	84.74	503.5	87.84	35.19	8.36
32406	2018-04-27 02:15:00:000	85.63	504.92	90.28	35.37	8.34
32407	2018-04-27 02:30:00:000	87.34	512.08	91.97	35.38	8.31
32408	2018-04-27 02:45:00:000	88.75	521.33	93.66	35.43	8.28
32409	2018-04-27 03:00:00:000	88.49	523.5	91.97	35.48	8.26
32410	2018-04-27 03:15:00:000	90.78	533.92	95.53	35.51	8.25
32411	2018-04-27 03:30:00:000	92.14	539.75	96.47	35.53	8.24
32412	2018-04-27 03:45:00:000	93.54	549.42	98.16	35.53	8.24
32413	2018-04-27 04:00:00:000	89.84	540.75	90.37	35.49	8.24
32414	2018-04-27 04:15:00:000	41.25	294.58	38.16	35.55	8.24
32415	2018-04-27 04:30:00:000	28.75	176.67	25.41	35.57	8.23
32416	2018-04-27 04:45:00:	34.11	201.67	29.91	36.1	8.25

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
32417	2018-04-27 05:00:00:000	53.54	297.83	53.63	36.37	8.28
32418	2018-04-27 05:15:00:000	91.04	510.42	93.56	36.25	8.19
32419	2018-04-27 05:30:00:000	90.78	532.58	94.59	36.27	8.19
32420	2018-04-27 05:45:00:000	87.66	520.0	91.5	36.21	8.19
32421	2018-04-27 06:00:00:000	83.12	500.83	85.41	36.13	8.18
32422	2018-04-27 06:15:00:000	85.16	500.83	88.87	36.02	8.16
32423	2018-04-27 06:30:00:000	85.99	504.92	90.0	35.4	8.13
32424	2018-04-27 06:45:00:000	90.52	526.75	94.13	34.67	8.09
32425	2018-04-27 07:00:00:000	100.42	580.58	100.78	34.18	8.06
32426	2018-04-27 07:15:00:000	142.81	798.75	137.62	33.85	8.01
32427	2018-04-27 07:30:00:000	168.96	961.75	159.66	33.63	7.97
32428	2018-04-27 07:45:00:000	193.28	1123.17	178.41	33.5	7.96
32429	2018-04-27 08:00:00:000	200.62	1176.25	182.91	34.16	7.96
32430	2018-04-27 08:15:00:000	180.99	1083.58	168.75	34.7	7.98
32431	2018-04-27 08:30:00:000	150.57	915.0	143.53	35.02	8.0
32432	2018-04-27 08:45:00:000	120.94	737.58	118.97	35.47	8.03
32433	2018-04-27 09:00:00:000	97.08	618.92	95.91	36.01	8.08
32434	2018-04-27 09:15:00:000	83.44	507.33	85.12	36.54	8.18
32435	2018-04-27 09:30:00:000	72.86	441.58	75.94	36.67	8.25
32436	2018-04-27 09:45:00:	65.21	394.5	68.06	36.48	8.3

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
32437	2018-04-27 10:00:00:000	62.81	378.17	64.03	35.71	8.34
32438	2018-04-27 10:15:00:000	65.94	388.42	68.53	35.49	8.36
32439	2018-04-27 10:30:00:000	69.58	410.67	72.56	35.35	8.34
32440	2018-04-27 10:45:00:000	69.58	412.92	72.56	35.25	8.35
32441	2018-04-27 11:00:00:000	67.5	404.75	69.0	35.19	8.37
32442	2018-04-27 11:15:00:000	67.5	400.25	70.03	35.2	8.39
32443	2018-04-27 11:30:00:000	67.24	398.75	70.03	35.14	8.41
32444	2018-04-27 11:45:00:000	66.67	397.75	70.03	35.13	8.43
32445	2018-04-27 12:00:00:000	67.81	400.5	68.91	35.25	8.45
32446	2018-04-27 12:15:00:000	70.62	415.5	73.41	35.21	8.47
32447	2018-04-27 12:30:00:000	49.27	322.08	51.0	35.25	8.49
32448	2018-04-27 12:45:00:000	44.95	259.92	45.66	35.4	8.49
32449	2018-04-27 13:00:00:000	65.68	361.5	66.28	35.43	8.48
32450	2018-04-27 13:15:00:000	77.34	447.08	78.56	35.52	8.49
32451	2018-04-27 13:30:00:000	77.24	459.25	79.03	35.69	8.49
32452	2018-04-27 13:45:00:000	79.53	470.67	80.44	35.74	8.48
32453	2018-04-27 14:00:00:000	74.9	453.33	74.25	35.71	8.48
32454	2018-04-27 14:15:00:000	70.62	424.33	72.66	35.69	8.48
32455	2018-04-27 14:30:00:000	66.87	402.5	69.28	35.67	8.48
32456	2018-04-27 14:45:00:	62.97	380.75	65.62	36.6	8.48

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
32457	2018-04-27 15:00:00:000	58.07	357.17	60.47	37.04	8.47
32458	2018-04-27 15:15:00:000	57.03	344	60.47	37.09	8.46
32459	2018-04-27 15:30:00:000	57.29	344	60.47	37.15	8.46
32460	2018-04-27 15:45:00:000	57.81	344.0	60.38	37.07	8.46
32461	2018-04-27 16:00:00:000	58.33	348.58	61.41	36.53	8.46
32462	2018-04-27 16:15:00:000	60.89	361.25	64.03	36.09	8.46
32463	2018-04-27 16:30:00:000	63.65	377.0	66.94	35.78	8.46
32464	2018-04-27 16:45:00:000	65.99	392.42	69.09	35.99	8.46
32465	2018-04-27 17:00:00:000	63.91	386.5	66.38	36.47	8.46
32466	2018-04-27 17:15:00:000	61.93	372.83	65.44	36.73	8.45
32467	2018-04-27 17:30:00:000	69.06	406.08	71.62	36.51	8.43
32468	2018-04-27 17:45:00:000	75.05	443.67	77.16	36.39	8.41
32469	2018-04-27 18:00:00:000	79.06	465.08	81.28	35.96	8.4
32470	2018-04-27 18:15:00:000	85.63	503.25	89.53	35.48	8.4
32471	2018-04-27 18:30:00:000	87.4	517.67	91.69	35.15	8.41
32472	2018-04-27 18:45:00:000	87.71	523.58	91.22	34.92	8.41
32473	2018-04-27 19:00:00:000	87.5	521.42	90.84	34.77	8.41
32474	2018-04-27 19:15:00:000	89.27	527.92	93.94	34.66	8.43
32475	2018-04-27 19:30:00:000	91.25	538.25	95.62	34.56	8.45
32476	2018-04-27 19:45:00:	92.86	554.67	96.0	34.48	8.47

186 (pH)(avg) 825

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
32477	2018-04-27 20:00:00:000	101.61	586.5	102.28	34.44	8.48
32478	2018-04-27 20:15:00:000	109.06	640.0	110.53	34.41	8.48
32479	2018-04-27 20:30:00:000	104.79	621.08	106.97	34.4	8.49
32480	2018-04-27 20:45:00:000	101.98	614.25	104.34	34.36	8.48
32481	2018-04-27 21:00:00:000	104.64	610.25	105.47	34.33	8.47
32482	2018-04-27 21:15:00:000	127.66	733.08	125.91	34.7	8.43
32483	2018-04-27 21:30:00:000	121.35	723.5	119.91	35.49	8.42
32484	2018-04-27 21:45:00:000	107.19	654.08	106.5	35.82	8.42
32485	2018-04-27 22:00:00:000	99.48	591.58	99.75	35.92	8.41
32486	2018-04-27 22:15:00:000	97.5	580.25	99.28	35.99	8.41
32487	2018-04-27 22:30:00:000	95.0	561.67	97.31	36.04	8.42
32488	2018-04-27 22:45:00:000	92.45	555.0	94.41	36.12	8.44
32489	2018-04-27 23:00:00:000	91.61	540.08	92.72	36.26	8.46
32490	2018-04-27 23:15:00:000	91.61	541.42	94.78	36.35	8.47
32491	2018-04-27 23:30:00:000	89.95	531.92	92.81	36.35	8.46
32492	2018-04-27 23:45:00:000	89.38	533.25	92.81	35.66	8.41
32493	2018-04-28 00:00:00:000	93.83	550.12	96.33	35.08	8.35
32494	2018-04-28 00:15:00:000	98.49	578.25	102.66	34.85	8.35
32495	2018-04-28 00:30:00:000	99.69	584.92	104.16	34.55	8.36
32496	2018-04-28 00:45:00:	105.1	613.08	108.75	34.28	8.35

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
33057	2018-05-03 21:00:00:000	91.72	546.42	94.78	35.06	8.69
33058	2018-05-03 21:15:00:000	55.57	368.25	54.47	35.34	8.71
33059	2018-05-03 21:30:00:000	37.71	235.42	33.94	35.57	8.75
33060	2018-05-03 21:45:00:000	78.7	439.08	79.59	35.66	8.78
33061	2018-05-03 22:00:00:000	92.92	531.5	96.0	35.89	8.8
33062	2018-05-03 22:15:00:000	100.05	583.75	102.66	36.03	8.8
33063	2018-05-03 22:30:00:000	99.14	582.88	101.95	36.27	8.79
33064	2018-05-03 22:45:00:000	96.93	572.83	100.22	36.44	8.78
33065	2018-05-03 23:00:00:000	89.27	543.42	90.38	36.6	8.77
33066	2018-05-03 23:15:00:000	89.27	525.75	91.97	36.6	8.74
33067	2018-05-03 23:30:00:000	87.66	517	91.13	36.48	8.72
33068	2018-05-03 23:45:00:000	85.89	509.0	89.34	36.47	8.7
33069	2018-05-04 00:00:00:000	81.09	489.92	82.31	36.42	8.68
33070	2018-05-04 00:15:00:000	74.37	453.63	76.5	35.82	8.65
33071	2018-05-04 00:30:00:000	29.69	223.33	29.53	35.3	8.64
33072	2018-05-04 00:45:00:000	12.55	91.42	12.09	35.04	8.66
33073	2018-05-04 01:00:00:000	14.53	87.75	13.59	36.25	8.69
33074	2018-05-04 01:15:00:000	16.56	99.17	15.19	36.56	8.62
33075	2018-05-04 01:30:00:000	15.94	98.25	15.19	34.04	8.66
33076	2018-05-04 01:45:00:	42.71	221.58	43.41	36.81	8.51

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
33077	2018-05-04 02:00:00:000	79.95	432.33	81.75	37.04	8.49
33078	2018-05-04 02:15:00:000	81.41	478.08	84.84	37.19	8.45
33079	2018-05-04 02:30:00:000	77.45	460.92	81.28	37.24	8.41
33080	2018-05-04 02:45:00:000	75.68	447.83	79.12	37.3	8.41
33081	2018-05-04 03:00:00:000	73.75	439.25	75.19	37.26	8.43
33082	2018-05-04 03:15:00:000	76.56	450.5	80.81	37.32	8.48
33083	2018-05-04 03:30:00:000	78.28	458.67	81.28	37.35	8.51
33084	2018-05-04 03:45:00:000	78.54	461.42	81.84	37.3	8.53
33085	2018-05-04 04:00:00:000	77.71	461.83	79.78	37.18	8.55
33086	2018-05-04 04:15:00:000	82.24	480.42	86.34	37.12	8.57
33087	2018-05-04 04:30:00:000	83.7	491.83	88.41	37.04	8.57
33088	2018-05-04 04:45:00:000	84.22	496.25	88.87	37.01	8.57
33089	2018-05-04 05:00:00:000	81.46	487.25	84.38	36.99	8.57
33090	2018-05-04 05:15:00:000	84.27	494.5	88.87	36.98	8.56
33091	2018-05-04 05:30:00:000	84.84	498.5	88.87	36.99	8.56
33092	2018-05-04 05:45:00:000	85.16	498.5	89.34	37.03	8.54
33093	2018-05-04 06:00:00:000	81.46	489.5	84.38	37.09	8.52
33094	2018-05-04 06:15:00:000	86.04	504.08	90.47	37.14	8.5
33095	2018-05-04 06:30:00:000	87.66	513.58	92.16	37.27	8.48
33096	2018-05-04 06:45:00:	87.14	513.17	92.06	37.4	8.43

'S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
33097	2018-05-04 07:00:00:000	81.98	494.08	84.38	37.65	8.36
33098	2018-05-04 07:15:00:000	80.26	476.83	84.38	38.01	8.22
33099	2018-05-04 07:30:00:000	79.06	465.75	82.69	37.94	8.07
33100	2018-05-04 07:45:00:000	81.25	478.0	85.22	37.18	8.08
33101	2018-05-04 08:00:00:000	83.23	492.42	85.12	36.4	8.23
33102	2018-05-04 08:15:00:000	90.21	526.75	93.75	36.14	8.33
33103	2018-05-04 08:30:00:000	90.78	536.0	94.78	36.49	8.32
33104	2018-05-04 08:45:00:000	87.08	516.83	91.22	37.05	8.16
33105	2018-05-04 09:00:00:000	77.97	477.42	79.97	37.23	8.03
33106	2018-05-04 09:15:00:000	75.99	452.42	79.41	37.38	7.94
33107	2018-05-04 09:30:00:000	72.24	431.67	75.75	37.45	7.87
33108	2018-05-04 09:45:00:000	69.69	415.25	72.56	37.49	7.82
33109	2018-05-04 10:00:00:000	67.45	404.42	68.62	37.17	7.85
33110	2018-05-04 10:15:00:000	69.11	408.0	72.28	36.92	7.91
33111	2018-05-04 10:30:00:000	70.47	416.58	74.25	36.72	7.97
33112	2018-05-04 10:45:00:000	72.24	425.17	75.28	36.54	8.03
33113	2018-05-04 11:00:00:000	71.04	425.58	72.09	36.58	8.09
33114	2018-05-04 11:15:00:000	72.71	431.42	76.22	37.21	8.05
33115	2018-05-04 11:30:00:000	70.1	418.75	73.69	37.63	7.94
33116	2018-05-04 11:45:00:	67.55	402.83	70.97	37.83	7.91

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
33117	2018-05-04 12:00:00:000	64.69	389.75	66.94	38.01	7.94
33118	2018-05-04 12:15:00:000	62.76	376.17	66.0	38.16	7.99
33119	2018-05-04 12:30:00:000	61.56	367.5	64.97	38.24	8.03
33120	2018-05-04 12:45:00:000	60.68	361.17	63.75	38.3	8.06
33121	2018-05-04 13:00:00:000	59.84	358.08	61.22	38.37	8.08
33122	2018-05-04 13:15:00:000	59.79	356.17	62.72	38.43	8.09
33123	2018-05-04 13:30:00:000	59.17	354.17	62.16	38.31	8.09
33124	2018-05-04 13:45:00:000	61.72	364.67	65.25	37.64	8.13
33125	2018-05-04 14:00:00:000	65.63	384.17	68.34	37.13	8.19
33126	2018-05-04 14:15:00:000	69.06	406.88	72.14	36.73	8.24
33127	2018-05-04 14:30:00:000	70.78	419.0	74.25	36.43	8.28
33128	2018-05-04 14:45:00:000	71.56	425.25	75.37	36.2	8.31
33129	2018-05-04 15:00:00:000	71.67	426.67	72.94	36.04	8.34
33130	2018-05-04 15:15:00:000	73.59	437.17	77.06	35.88	8.36
33131	2018-05-04 15:30:00:000	75.16	443.5	78.56	35.98	8.37
33132	2018-05-04 15:45:00:000	75.57	449.0	79.5	36.64	8.36
33133	2018-05-04 16:00:00:000	73.85	447.08	76.41	36.87	8.37
33134	2018-05-04 16:15:00:000	79.01	465.75	82.69	36.62	8.39
33135	2018-05-04 16:30:00:000	81.61	481.08	85.22	36.56	8.41
33136	2018-05-04 16:45:00:	81.25	482.83	85.22	36.77	8.42

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
33137	2018-05-04 17:00:00:000	77.5	469.75	79.97	36.91	8.4
33138	2018-05-04 17:15:00:000	78.33	466.5	81.84	37.01	8.39
33139	2018-05-04 17:30:00:000	78.33	466.5	81.84	37.12	8.39
33140	2018-05-04 17:45:00:000	78.96	468.33	83.16	37.16	8.4
33141	2018-05-04 18:00:00:000	77.4	464.75	79.5	37.2	8.41
33142	2018-05-04 18:15:00:000	80.26	473.92	84.28	36.97	8.42
33143	2018-05-04 18:30:00:000	83.39	491.17	87.28	36.42	8.44
33144	2018-05-04 18:45:00:000	86.25	507.17	90.47	36.02	8.45
33145	2018-05-04 19:00:00:000	84.53	507.17	86.91	35.69	8.47
33146	2018-05-04 19:15:00:000	89.37	525.17	93.09	35.76	8.48
33147	2018-05-04 19:30:00:000	88.02	523.0	92.16	36.26	8.48
33148	2018-05-04 19:45:00:000	85.0	506.33	89.06	36.71	8.47
33149	2018-05-04 20:00:00:000	80.47	486.92	82.97	36.93	8.46
33150	2018-05-04 20:15:00:000	82.19	486.92	86.62	37.02	8.47
33151	2018-05-04 20:30:00:000	84.17	495.92	88.59	37.09	8.49
33152	2018-05-04 20:45:00:000	86.15	508.17	90.0	37.28	8.53
33153	2018-05-04 21:00:00:000	88.23	521.92	89.72	36.49	8.52
33154	2018-05-04 21:15:00:000	103.65	598.58	107.72	35.79	8.52
33155	2018-05-04 21:30:00:000	105.47	618.58	108.84	35.62	8.55
33156	2018-05-04 21:45:00:	102.86	608.08	106.78	35.95	8.6

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
33157	2018-05-04 22:00:00:000	88.96	550.5	90.75	37.04	8.64
33158	2018-05-04 22:15:00:000	85.08	507.38	88.03	37.32	8.64
33159	2018-05-04 22:30:00:000	80.78	480.33	84.28	37.45	8.63
33160	2018-05-04 22:45:00:000	78.54	463.67	81.84	37.32	8.61
33161	2018-05-04 23:00:00:000	74.84	446.83	77.72	37.75	8.58
33162	2018-05-04 23:15:00:000	113.8	614.17	99.75	37.67	8.59
33163	2018-05-04 23:30:00:000	38.18	283.75	33.09	37.74	8.63
33164	2018-05-04 23:45:00:000	58.33	307.67	57.19	38.01	8.62
33165	2018-05-05 00:00:00:000	80.31	458.25	82.31	38.19	8.6
33166	2018-05-05 00:15:00:000	80.83	476.33	83.91	38.36	8.59
33167	2018-05-05 00:30:00:000	78.23	464.0	81.84	38.51	8.59
33168	2018-05-05 00:45:00:000	75.62	453.58	78.66	38.62	8.59
33169	2018-05-05 01:00:00:000	74.53	439.5	77.16	38.64	8.59
33170	2018-05-05 01:15:00:000	74.84	442.75	78.19	38.67	8.59
33171	2018-05-05 01:30:00:000	74.84	442.0	78.19	38.68	8.6
33172	2018-05-05 01:45:00:000	74.84	440.83	78.19	38.64	8.6
33173	2018-05-05 02:00:00:000	73.91	437.75	78.19	38.67	8.6
33174	2018-05-05 02:15:00:000	73.91	436.0	78.19	38.45	8.6
33175	2018-05-05 02:30:00:000	77.08	451.33	81.28	37.85	8.6
33176	2018-05-05 02:45:00:	82.81	481.75	86.34	37.45	8.63

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
33737	2018-05-10 23:30:00:000	72.29	428.92	75.28	37.13	8.65
33738	2018-05-10 23:45:00:000	73.7	434.33	76.78	37.25	8.64
33739	2018-05-11 00:00:00:000	74.32	442.5	76.88	36.75	8.61
33740	2018-05-11 00:15:00:000	81.41	475.58	85.69	36.66	8.57
33741	2018-05-11 00:30:00:000	83.75	493.33	88.59	36.8	8.55
33742	2018-05-11 00:45:00:000	84.84	499.75	89.72	36.91	8.54
33743	2018-05-11 01:00:00:000	81.41	490.67	84.09	36.95	8.53
33744	2018-05-11 01:15:00:000	84.84	499.17	89.72	37.01	8.52
33745	2018-05-11 01:30:00:000	84.84	501.08	89.72	37.14	8.52
33746	2018-05-11 01:45:00:000	83.44	494.25	88.13	37.27	8.51
33747	2018-05-11 02:00:00:000	80.89	483.5	84.66	37.35	8.51
33748	2018-05-11 02:15:00:000	81.41	480.67	85.78	37.52	8.5
33749	2018-05-11 02:30:00:000	80.62	476.58	84.66	37.61	8.49
33750	2018-05-11 02:45:00:000	80.94	476.58	84.84	37.63	8.48
33751	2018-05-11 03:00:00:000	80.94	477.08	84.75	37.77	8.47
33752	2018-05-11 03:15:00:000	79.58	471.25	83.16	37.82	8.46
33753	2018-05-11 03:30:00:000	78.44	463.42	82.13	37.91	8.44
33754	2018-05-11 03:45:00:000	76.67	454.5	81.0	37.98	8.42
33755	2018-05-11 04:00:00:000	73.54	442.67	76.59	38.02	8.4
33756	2018-05-11 04:15:00:	73.85	436.83	78.19	38.1	8.37

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
33757	2018-05-11 04:30:00:000	73.28	433.25	78.19	38.13	8.35
33758	2018-05-11 04:45:00:000	73.02	430.92	78.19	38.18	8.32
33759	2018-05-11 05:00:00:000	70.52	422.83	73.5	38.23	8.29
33760	2018-05-11 05:15:00:000	72.19	424.58	76.78	38.24	8.27
33761	2018-05-11 05:30:00:000	72.19	425	76.78	38.25	8.25
33762	2018-05-11 05:45:00:000	72.19	425.0	76.78	38.18	8.24
33763	2018-05-11 06:00:00:000	69.74	418.33	73.59	38.33	8.22
33764	2018-05-11 06:15:00:000	70.31	413.75	74.53	38.55	8.22
33765	2018-05-11 06:30:00:000	68.59	406.08	73.03	38.56	8.21
33766	2018-05-11 06:45:00:000	66.56	395.17	71.06	38.75	8.2
33767	2018-05-11 07:00:00:000	62.81	380.58	66.28	38.87	8.19
33768	2018-05-11 07:15:00:000	63.65	377.0	68.34	38.64	8.17
33769	2018-05-11 07:30:00:000	64.48	380.58	68.81	38.38	8.16
33770	2018-05-11 07:45:00:000	64.38	380.5	68.62	38.64	8.18
33771	2018-05-11 08:00:00:000	63.18	377.75	65.62	38.49	8.19
33772	2018-05-11 08:15:00:000	63.44	375.92	67.12	38.21	8.2
33773	2018-05-11 08:30:00:000	62.5	372.17	66.0	37.98	8.2
33774	2018-05-11 08:45:00:000	61.09	365.33	65.06	37.97	8.2
33775	2018-05-11 09:00:00:000	61.35	363.83	65.06	37.68	8.21
33776	2018-05-11 09:15:00:	63.02	374.92	67.5	37.33	8.22

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
33777	2018-05-11 09:30:00:000	63.91	378.92	68.06	37.35	8.22
33778	2018-05-11 09:45:00:000	63.02	376.25	66.47	37.45	8.23
33779	2018-05-11 10:00:00:000	63.85	378.5	67.03	37.45	8.24
33780	2018-05-11 10:15:00:000	65.0	385.25	69.09	37.52	8.26
33781	2018-05-11 10:30:00:000	65.78	389.83	70.03	37.57	8.28
33782	2018-05-11 10:45:00:000	65.21	391.58	69.0	37.7	8.3
33783	2018-05-11 11:00:00:000	64.9	388.75	67.5	37.83	8.32
33784	2018-05-11 11:15:00:000	66.56	394.17	70.5	38.09	8.34
33785	2018-05-11 11:30:00:000	66.2	394.17	70.31	38.23	8.36
33786	2018-05-11 11:45:00:000	68.23	408.17	70.88	38.19	8.38
33787	2018-05-11 12:00:00:000	68.75	411.75	70.88	38.25	8.4
33788	2018-05-11 12:15:00:000	71.25	421.25	74.25	38.24	8.42
33789	2018-05-11 12:30:00:000	71.56	424.38	74.25	38.37	8.43
33790	2018-05-11 12:45:00:000	71.56	424.25	74.25	38.4	8.44
33791	2018-05-11 13:00:00:000	69.79	419.75	71.25	38.44	8.45
33792	2018-05-11 13:15:00:000	71.41	424.83	74.25	38.42	8.45
33793	2018-05-11 13:30:00:000	71.41	425.63	74.25	38.36	8.46
33794	2018-05-11 13:45:00:000	71.41	427.0	74.25	38.36	8.46
33795	2018-05-11 14:00:00:000	70.26	422.5	71.72	38.31	8.47
33796	2018-05-11 14:15:00:	71.67	427.33	74.72	38.33	8.47

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
33797	2018-05-11 14:30:00:000	71.35	428.25	75.66	38.31	8.47
33798	2018-05-11 14:45:00:000	72.45	430.5	75.66	37.93	8.47
33799	2018-05-11 15:00:00:000	72.19	433.75	74.16	37.51	8.47
33800	2018-05-11 15:15:00:000	74.69	444.58	77.63	37.68	8.48
33801	2018-05-11 15:30:00:000	73.8	441.42	77.06	37.93	8.48
33802	2018-05-11 15:45:00:000	72.45	432.25	75.66	38.16	8.48
33803	2018-05-11 16:00:00:000	68.8	419.67	70.59	38.15	8.48
33804	2018-05-11 16:15:00:000	71.09	421.0	74.16	37.9	8.48
33805	2018-05-11 16:30:00:000	71.93	427.33	75.19	37.57	8.48
33806	2018-05-11 16:45:00:000	72.71	433.67	76.13	37.34	8.48
33807	2018-05-11 17:00:00:000	71.56	431.0	72.66	37.26	8.48
33808	2018-05-11 17:15:00:000	72.19	432.42	75.66	37.28	8.48
33809	2018-05-11 17:30:00:000	72.19	430.5	75.66	37.26	8.48
33810	2018-05-11 17:45:00:000	71.41	427.42	74.72	37.31	8.48
33811	2018-05-11 18:00:00:000	69.74	420.17	71.25	37.26	8.49
33812	2018-05-11 18:15:00:000	71.41	424.42	74.25	37.23	8.49
33813	2018-05-11 18:30:00:000	71.51	426.17	74.25	37.3	8.49
33814	2018-05-11 18:45:00:000	71.56	424.83	74.25	37.34	8.5
33815	2018-05-11 19:00:00:000	69.06	416.75	70.78	37.35	8.5
33816	2018-05-11 19:15:00:	70.62	419.17	73.97	37.29	8.5

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
33817	2018-05-11 19:30:00:000	71.46	423.17	74.53	37.24	8.5
33818	2018-05-11 19:45:00:000	71.77	426.5	74.53	37.25	8.5
33819	2018-05-11 20:00:00:000	71.2	425.92	72.94	37.17	8.49
33820	2018-05-11 20:15:00:000	72.66	430.5	76.69	37.54	8.48
33821	2018-05-11 20:30:00:000	74.06	437.83	78.09	37.61	8.47
33822	2018-05-11 20:45:00:000	76.09	449.08	80.25	37.68	8.46
33823	2018-05-11 21:00:00:000	77.6	456.83	81.38	37.54	8.46
33824	2018-05-11 21:15:00:000	81.3	475.92	85.5	37.13	8.45
33825	2018-05-11 21:30:00:000	84.22	494.58	88.59	37.22	8.46
33826	2018-05-11 21:45:00:000	84.84	500.58	89.72	37.36	8.47
33827	2018-05-11 22:00:00:000	83.07	495.5	86.62	37.49	8.48
33828	2018-05-11 22:15:00:000	84.58	498.33	88.59	37.79	8.49
33829	2018-05-11 22:30:00:000	82.24	489.25	87.19	38.09	8.5
33830	2018-05-11 22:45:00:000	79.74	473.83	84.09	38.26	8.51
33831	2018-05-11 23:00:00:000	77.45	462.5	81.0	38.13	8.51
33832	2018-05-11 23:15:00:000	79.11	467	83.53	37.64	8.5
33833	2018-05-11 23:30:00:000	78.8	467.0	82.41	38.13	8.51
33834	2018-05-11 23:45:00:000	75.99	455.25	79.97	38.41	8.52
33835	2018-05-12 00:00:00:000	73.44	441.58	76.31	38.68	8.52
33836	2018-05-12 00:15:00:	71.77	428.08	75.75	38.95	8.52

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
38017	2018-06-27 23:30:00:000	107.08	626.92	110.72	37.06	8.49
38018	2018-06-27 23:45:00:000	114.43	665.42	117.56	36.69	8.53
38019	2018-06-28 00:00:00:000	115.57	683.92	115.69	36.46	8.55
38020	2018-06-28 00:15:00:000	122.19	716.25	124.31	36.27	8.54
38021	2018-06-28 00:30:00:000	118.39	699.75	121.88	36.26	8.53
38022	2018-06-28 00:45:00:000	116.67	687.17	119.63	36.31	8.52
38023	2018-06-28 01:00:00:000	110.42	664.08	112.03	36.34	8.51
38024	2018-06-28 01:15:00:000	113.28	665.0	116.72	36.34	8.5
38025	2018-06-28 01:30:00:000	111.51	657.67	115.03	36.35	8.5
38026	2018-06-28 01:45:00:000	109.79	647.33	113.62	36.35	8.5
38027	2018-06-28 02:00:00:000	102.19	619.17	104.91	36.37	8.51
38028	2018-06-28 02:15:00:000	103.28	607.33	107.44	36.52	8.56
38029	2018-06-28 02:30:00:000	106.09	619.58	109.97	36.55	8.62
38030	2018-06-28 02:45:00:000	112.97	659.0	115.03	36.79	8.62
38031	2018-06-28 03:00:00:000	106.15	640.08	106.87	36.8	8.56
38032	2018-06-28 03:15:00:000	108.91	638.17	111.66	36.86	8.5
38033	2018-06-28 03:30:00:000	107.29	632.83	110.53	36.9	8.46
38034	2018-06-28 03:45:00:000	105.52	623.75	108.84	36.98	8.43
38035	2018-06-28 04:00:00:000	101.56	607.83	104.44	37	8.41
38036	2018-06-28 04:15:00:	102.19	601.58	106.03	37.0	8.4

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
38037	2018-06-28 04:30:00:000	102.19	599.75	106.03	37.01	8.38
38038	2018-06-28 04:45:00:000	100.47	599.25	103.41	37	8.37
38039	2018-06-28 05:00:00:000	98.23	588.83	100.31	37.0	8.37
38040	2018-06-28 05:15:00:000	102.45	599.67	106.03	37.02	8.37
38041	2018-06-28 05:30:00:000	103.33	606.5	106.97	37.02	8.37
38042	2018-06-28 05:45:00:000	104.17	611.42	350.53	37.0	8.37
38043	2018-06-28 06:00:00:000	99.64	598.25	101.44	37.02	8.37
38044	2018-06-28 06:15:00:000	105.31	615.08	108.56	37.08	8.37
38045	2018-06-28 06:30:00:000	106.46	622.5	109.03	37.08	8.38
38046	2018-06-28 06:45:00:000	106.46	622.92	109.03	37.08	8.37
38047	2018-06-28 07:00:00:000	101.61	609.17	102.94	37.1	8.38
38048	2018-06-28 07:15:00:000	105.47	617.33	108.56	37.12	8.37
38049	2018-06-28 07:30:00:000	105.0	616.92	108.47	37.16	8.37
38050	2018-06-28 07:45:00:000	102.45	614.17	104.91	37.19	8.37
38051	2018-06-28 08:00:00:000	97.89	597.13	99.7	37.36	8.37
38052	2018-06-28 08:15:00:000	101.25	595.92	104.34	37.94	8.41
38053	2018-06-28 08:30:00:000	98.96	585.0	102.19	38.35	8.45
38054	2018-06-28 08:45:00:000	96.87	573.25	100.41	38.55	8.47
38055	2018-06-28 09:00:00:000	91.2	551.5	92.44	38.64	8.47
38056	2018-06-28 09:15:00:	93.96	552.33	96.47	38.69	8.48

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
38057	2018-06-28 09:30:00:000	94.22	554.17	96.47	38.72	8.48
38058	2018-06-28 09:45:00:000	90.83	547.75	92.81	38.95	8.5
38059	2018-06-28 10:00:00:000	84.84	506.38	87.19	39.09	8.46
38060	2018-06-28 10:15:00:000	83.98	499.62	87.89	39.08	8.41
38061	2018-06-28 10:30:00:000	82.81	490.08	85.69	38.99	8.38
38062	2018-06-28 10:45:00:000	81.67	483.75	85.69	38.96	8.37
38063	2018-06-28 11:00:00:000	78.8	472.5	81.0	38.95	8.34
38064	2018-06-28 11:15:00:000	78.8	466.08	81.94	38.92	8.32
38065	2018-06-28 11:30:00:000	74.53	444.33	77.91	39.32	8.29
38066	2018-06-28 11:45:00:000	72.29	429.25	75.75	39.61	8.29
38067	2018-06-28 12:00:00:000	68.59	413.5	70.59	39.92	8.25
38068	2018-06-28 12:15:00:000	67.03	399.75	70.59	40.23	8.22
38069	2018-06-28 12:30:00:000	65.68	391.17	69.09	40.26	8.19
38070	2018-06-28 12:45:00:000	66.46	393.42	70.03	40.12	8.17
38071	2018-06-28 13:00:00:000	66.72	394.75	69.33	40.02	8.16
38072	2018-06-28 13:15:00:000	67.81	400.67	71.06	39.86	8.15
38073	2018-06-28 13:30:00:000	68.44	406.37	72.28	39.79	8.14
38074	2018-06-28 13:45:00:000	77.73	453.25	81.56	38.4	8.12
38075	2018-06-28 14:00:00:000	82.03	482.75	84.28	37.99	8.14
38076	2018-06-28 14:15:00:	87.97	516.5	91.41	38.0	8.16

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
38077	2018-06-28 14:30:00:000	88.23	521.67	92.62	38.06	8.18
38078	2018-06-28 14:45:00:000	87.97	521.75	91.55	38.28	8.19
38079	2018-06-28 15:00:00:000	84.92	504.88	88.45	38.45	8.19
38080	2018-06-28 15:15:00:000	86.25	508.75	90	38.53	8.19
38081	2018-06-28 15:30:00:000	85.36	507.08	90.0	38.56	8.19
38082	2018-06-28 15:45:00:000	84.92	504.12	88.45	38.61	8.19
38083	2018-06-28 16:00:00:000	82.03	487.08	84.38	38.51	8.19
38084	2018-06-28 16:15:00:000	84.14	496.63	88.59	38.46	8.18
38085	2018-06-28 16:30:00:000	84.53	499.25	88.59	38.42	8.18
38086	2018-06-28 16:45:00:000	83.39	499.33	86.53	38.42	8.18
38087	2018-06-28 17:00:00:000	82.81	488.5	85.36	38.33	8.18
38088	2018-06-28 17:15:00:000	84.14	496.75	88.59	38.33	8.18
38089	2018-06-28 17:30:00:000	84.53	499.5	88.59	38.29	8.17
38090	2018-06-28 17:45:00:000	83.12	500.75	86.53	38.34	8.17
38091	2018-06-28 18:00:00:000	81.51	484.08	84.38	38.3	8.17
38092	2018-06-28 18:15:00:000	83.75	492.75	87.19	38.3	8.18
38093	2018-06-28 18:30:00:000	84.84	499.0	88.59	38.24	8.18
38094	2018-06-28 18:45:00:000	85.26	505.67	89.91	37.83	8.18
38095	2018-06-28 19:00:00:000	86.33	505.25	89.58	37.49	8.2
38096	2018-06-28 19:15:00:	90.42	527.17	94.22	37.39	8.2

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
38097	2018-06-28 19:30:00:000	95.31	556.5	99.0	37.37	8.22
38098	2018-06-28 19:45:00:000	98.95	588.0	102.02	37.31	8.27
38099	2018-06-28 20:00:00:000	99.14	580.25	101.53	37.14	8.32
38100	2018-06-28 20:15:00:000	104.43	611.08	108.56	37.02	8.35
38101	2018-06-28 20:30:00:000	104.69	617	109.03	36.92	8.37
38102	2018-06-28 20:45:00:000	104.69	617.0	109.12	36.9	8.38
38103	2018-06-28 21:00:00:000	98.75	603.38	100.69	36.88	8.38
38104	2018-06-28 21:15:00:000	104.43	611.83	108.47	36.92	8.38
38105	2018-06-28 21:45:00:000	102.4	612.75	105.38	37.01	8.39
38106	2018-06-28 22:00:00:000	101.33	595	104.48	37.03	8.39
38107	2018-06-28 22:15:00:000	104.38	611.0	107.91	37.06	8.39
38108	2018-06-28 22:30:00:000	104.95	617.33	108.84	37.12	8.39
38109	2018-06-28 22:45:00:000	104.69	616.92	108.84	37.14	8.39
38110	2018-06-28 23:00:00:000	99.22	597.75	101.25	37.18	8.39
38111	2018-06-28 23:15:00:000	102.45	601.42	106.41	37.17	8.4
38112	2018-06-28 23:30:00:000	102.45	603.25	106.5	37.19	8.4
38113	2018-06-28 23:45:00:000	102.71	603.67	106.97	37.18	8.4
38114	2018-06-29 00:00:00:000	97.03	591.63	98.86	37.19	8.4
38115	2018-06-29 00:15:00:000	102.14	598.75	106.5	37.2	8.4
38116	2018-06-29 00:30:00:	102.97	606.0	107.44	37.19	8.41

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
39297	2018-07-20 16:30:00:000	88.44	520.25	93.66	36.68	8.26
39298	2018-07-20 16:45:00:000	89.22	524.42	93.66	36.72	8.27
39299	2018-07-20 17:00:00:000	84.22	508.0	86.91	36.89	8.29
39300	2018-07-20 17:15:00:000	86.72	508.83	90.94	37.04	8.29
39301	2018-07-20 17:30:00:000	87.34	513.5	92.16	36.79	8.31
39302	2018-07-20 17:45:00:000	89.38	523.75	93.66	36.73	8.31
39303	2018-07-20 18:00:00:000	84.3	497.88	87.47	36.87	8.33
39304	2018-07-20 18:15:00:000	87.4	512.67	91.69	36.72	8.34
39305	2018-07-20 18:30:00:000	87.66	517.75	92.25	36.59	8.32
39306	2018-07-20 18:45:00:000	86.88	512.25	91.69	36.65	8.31
39307	2018-07-20 19:00:00:000	80.05	487.75	83.53	36.68	8.3
39308	2018-07-20 19:15:00:000	84.27	494.92	89.16	36.71	8.29
39309	2018-07-20 19:30:00:000	84.27	497.25	88.97	36.78	8.28
39310	2018-07-20 19:45:00:000	84.22	494.92	89.06	36.9	8.26
39311	2018-07-20 20:00:00:000	80.94	472.75	84.38	36.96	8.24
39312	2018-07-20 23:45:00:000	104.3	613.13	107.72	35.86	8.04
39313	2018-07-21 00:00:00:000	67.76	451.75	68.63	35.72	8.26
39314	2018-07-21 00:15:00:000	80.16	449.75	82.97	35.64	8.28
39315	2018-07-21 08:30:00:000	76.09	449.42	80.06	39.09	6.52
39316	2018-07-21 08:45:00:	72.24	428.42	76.41	39.11	6.72

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
39317	2018-07-21 09:00:00:000	66.2	404.83	69.19	39.14	6.58
39318	2018-07-21 09:15:00:000	67.34	398.0	72.28	39.51	6.5
39319	2018-07-21 09:30:00:000	67.27	397.25	72.14	39.45	6.36
39320	2018-07-21 09:45:00:000	66.09	391.0	70.12	39.48	6.53
39321	2018-07-21 10:00:00:000	61.2	370.67	63.94	39.53	6.62
39322	2018-07-21 10:15:00:000	63.07	372	66.84	39.54	6.66
39323	2018-07-21 10:30:00:000	64.14	378.0	68.91	39.55	6.72
39324	2018-07-21 10:45:00:000	63.65	377.83	67.41	39.78	6.78
39325	2018-07-21 11:00:00:000	59.38	370.5	61.31	39.67	6.67
39326	2018-07-21 11:15:00:000	66.61	391.92	71.16	38.83	6.79
39327	2018-07-21 11:30:00:000	71.41	418.25	75.94	38.3	6.9
39328	2018-07-21 11:45:00:000	77.08	450.0	81.28	37.93	7.21
39329	2018-07-21 12:00:00:000	76.17	461.75	79.17	37.83	7.25
39330	2018-07-21 12:15:00:000	78.85	464.92	82.97	37.8	7.52
39331	2018-07-21 12:30:00:000	79.58	469.83	84.38	37.65	7.63
39332	2018-07-21 12:45:00:000	82.45	482.5	86.91	37.38	7.7
39333	2018-07-21 13:00:00:000	79.64	478.42	82.78	37.37	7.79
39334	2018-07-21 13:15:00:000	85.0	496.67	89.34	37.44	7.88
39335	2018-07-21 13:30:00:000	86.41	507.42	90.28	37.45	7.93
39336	2018-07-21 13:45:00:	86.15	508.42	90.28	37.44	7.95

205 844

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
39337	2018-07-21 14:00:00:000	81.25	492.58	84.94	37.24	7.95
39338	2018-07-21 14:15:00:000	87.11	510.0	91.97	37.25	7.97
39339	2018-07-21 14:30:00:000	87.66	513.5	91.97	37.37	7.8
39340	2018-07-21 14:45:00:000	86.72	512.08	91.41	37.41	7.98
39341	2018-07-21 15:00:00:000	83.91	506.67	87.37	37.44	8.01
39342	2018-07-21 15:15:00:000	86.41	507.38	90.56	37.4	8.03
39343	2018-07-21 15:30:00:000	87.66	514.75	92.25	37.37	8.06
39344	2018-07-21 15:45:00:000	87.66	516.25	92.16	37.34	8.05
39345	2018-07-21 16:00:00:000	82.03	507.08	84.94	37.42	8.06
39346	2018-07-21 16:15:00:000	86.56	506.25	90.56	37.31	8.06
39347	2018-07-21 16:30:00:000	88.91	522.37	93.66	37.27	8.09
39348	2018-07-21 16:45:00:000	90.31	529.33	93.66	37.38	8.14
39349	2018-07-21 17:00:00:000	85.05	515.33	88.03	37.43	8.17
39350	2018-07-21 17:15:00:000	89.95	527.08	93.66	37.48	8.17
39351	2018-07-21 17:30:00:000	89.38	527.08	93.66	37.59	8.15
39352	2018-07-21 17:45:00:000	87.66	517.5	92.25	37.64	8.13
39353	2018-07-21 18:00:00:000	80.86	499.25	82.97	37.65	8.12
39354	2018-07-21 18:15:00:000	85.94	504	90.56	37.54	8.12
39355	2018-07-21 18:30:00:000	87.66	515.0	92.25	37.36	8.14
39356	2018-07-21 18:45:00:	88.59	519.83	92.25	37.37	8.18

206 845

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
39357	2018-07-21 19:00:00:000	80.16	520.25	81.56	37.36	8.2
39358	2018-07-21 23:30:00:000	42.03	250.0	39.94	35.86	8.38
39359	2018-07-21 23:45:00:000	65.31	347.12	64.69	35.81	8.36
39360	2018-07-22 07:15:00:000	45.0	245.37	43.17	37.78	6.85
39361	2018-07-22 07:45:00:000	90.62	530.25	93.94	38.92	6.27
39362	2018-07-22 09:15:00:000	78.8	464.17	82.97	39.44	4.97
39363	2018-07-22 09:30:00:000	77.11	455.0	81.56	39.48	5.03
39364	2018-07-22 09:45:00:000	73.98	441.38	79.03	39.71	5.11
39365	2018-07-22 10:00:00:000	70.55	428.38	74.39	40.02	5.1
39366	2018-07-22 10:15:00:000	67.08	400.0	72	40.17	5.11
39367	2018-07-22 10:30:00:000	67.03	397.75	72.0	40.42	5.16
39368	2018-07-22 10:45:00:000	67.03	395.5	71.06	40.41	5.18
39369	2018-07-22 11:00:00:000	66.51	393.67	68.91	40.25	5.22
39370	2018-07-22 11:15:00:000	73.91	431.75	78.19	39.48	5.24
39371	2018-07-22 11:30:00:000	78.12	457.5	82.13	39.11	5.28
39372	2018-07-22 11:45:00:000	83.28	486.75	87.19	38.86	5.55
39373	2018-07-22 12:00:00:000	80.63	487.37	82.83	38.94	5.95
39374	2018-07-22 12:15:00:000	83.2	490.12	87.33	38.82	6.1
39375	2018-07-22 12:30:00:000	88.02	513.25	92.34	38.76	6.22
39376	2018-07-22 12:45:00:	93.44	545.88	96.47	38.94	6.37

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
41257	2019-06-27 20:45:00:000	36.72	270.75	46.1	37.52	6.99
41258	2019-06-27 21:00:00:000	36.72	269.95	46.13	37.5	7
41259	2019-06-27 21:15:00:000	36.72	269.27	46.13	37.49	7
41260	2019-06-27 21:30:00:000	36.72	269.25	46.13	37.49	7.0
41261	2019-06-27 21:45:00:000	36.47	267.58	46.13	37.5	7.01
41262	2019-06-27 22:00:00:000	35.78	265.75	46.13	37.51	7.01
41263	2019-06-27 22:15:00:000	35.79	265.27	46.13	37.51	7.01
41264	2019-06-27 22:30:00:000	35.78	265.27	45.79	37.51	7.02
41265	2019-06-27 22:45:00:000	35.78	265.35	46.13	37.51	7.02
41266	2019-06-27 23:00:00:000	36.41	266.75	46.13	37.51	7.03
41267	2019-06-27 23:15:00:000	36.72	267.83	46.13	37.51	7.04
41268	2019-06-27 23:30:00:000	36.71	270.1	46.13	37.5	7.05
41269	2019-06-27 23:45:00:000	37.5	274.1	47.25	37.49	7.06
41270	2019-06-28 00:00:00:000	37.94	278.08	47.53	37.47	7.06
41271	2019-06-28 00:15:00:000	38.31	279.85	47.53	37.46	7.05
41272	2019-06-28 00:30:00:000	38.35	281.08	47.53	37.45	7.05
41273	2019-06-28 00:45:00:000	38.4	280.25	47.53	37.44	7.05
41274	2019-06-28 01:00:00:000	38.41	279.17	47.53	37.44	7.05
41275	2019-06-28 01:15:00:000	38.44	278.75	47.53	37.44	7.06
41276	2019-06-28 01:30:00:	38.44	278.77	47.53	37.44	7.06

208 847

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
41277	2019-06-28 01:45:00:000	38.44	278.78	47.53	37.43	7.06
41278	2019-06-28 02:00:00:000	36.95	272.83	45.09	37.42	7.06
41279	2019-06-28 02:15:00:000	37.26	273.62	46.45	37.42	7.07
41280	2019-06-28 02:30:00:000	37.5	277.0	47.53	37.42	7.07
41281	2019-06-28 02:45:00:000	37.5	278.18	47.53	37.41	7.06
41282	2019-06-28 03:00:00:000	37.5	278.75	47.53	37.41	7.06
41283	2019-06-28 03:15:00:000	37.5	278.33	47.53	37.39	7.06
41284	2019-06-28 03:30:00:000	37.5	278.04	47.53	37.39	7.06
41285	2019-06-28 03:45:00:000	37.5	278.78	47.53	37.39	7.06
41286	2019-06-28 04:00:00:000	37.51	277.5	47.53	37.38	7.05
41287	2019-06-28 04:15:00:000	37.5	277.5	47.53	37.37	7.05
41288	2019-06-28 04:30:00:000	37.5	277.5	47.53	37.36	7.06
41289	2019-06-28 04:45:00:000	37.53	277.08	47.53	37.34	7.06
41290	2019-06-28 05:00:00:000	36.72	272.77	44.81	37.31	7.06
41291	2019-06-28 05:15:00:000	37.31	273.3	46.13	37.29	7.06
41292	2019-06-28 05:30:00:000	37.65	273.5	46.69	37.28	7.05
41293	2019-06-28 05:45:00:000	37.66	273.77	46.69	37.27	7.04
41294	2019-06-28 06:00:00:000	37.44	273.5	46.13	37.27	7.04
41295	2019-06-28 06:15:00:000	37.65	273.5	46.22	37.26	7.03
41296	2019-06-28 06:30:00:	37.65	273.5	47.19	37.26	7.03

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
41297	2019-06-28 06:45:00:000	36.84	272.82	46.13	37.25	7.01
41298	2019-06-28 07:00:00:000	36.72	271.53	44.91	37.26	7.01
41299	2019-06-28 07:15:00:000	36.72	269.75	45.56	37.27	7.01
41300	2019-06-28 07:30:00:000	36.72	269.15	46.13	37.28	7.03
41301	2019-06-28 07:45:00:000	36.72	269.5	46.13	37.28	7.03
41302	2019-06-28 08:00:00:000	36.56	268.05	44.46	37.27	7.05
41303	2019-06-28 08:15:00:000	36.72	269.28	45.66	37.27	7.03
41304	2019-06-28 08:30:00:000	36.72	269.52	46.13	37.28	7.01
41305	2019-06-28 08:45:00:000	36.72	270.93	46.13	37.29	7.02
41306	2019-06-28 09:00:00:000	36.72	272	46.13	37.3	7.02
41307	2019-06-28 09:15:00:000	36.72	272.0	46.13	37.31	7.02
41308	2019-06-28 09:30:00:000	36.7	270.9	46.13	37.32	7.01
41309	2019-06-28 09:45:00:000	36.65	269.75	46.13	37.34	7.01
41310	2019-06-28 10:00:00:000	36.56	269.25	44.77	37.36	7
41311	2019-06-28 10:15:00:000	36.56	269.25	45.58	37.37	7.0
41312	2019-06-28 10:30:00:000	36.53	269.75	45.92	37.37	7.01
41313	2019-06-28 10:45:00:000	36.51	272.0	45.88	37.38	7.01
41314	2019-06-28 11:00:00:000	37.09	273.25	47.05	37.41	7.01
41315	2019-06-28 11:15:00:000	37.34	274.4	47.53	37.43	7.02
41316	2019-06-28 11:30:00	37.34	273.25	47.51	37.43	7.02

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
41317	2019-06-28 11:45:00:000	37.29	274.0	47.44	37.47	7.02
41318	2019-06-28 12:00:00:000	37.25	274.33	47.48	37.47	7.03
41319	2019-06-28 12:15:00:000	36.64	273.25	46.59	37.5	7.04
41320	2019-06-28 12:30:00:000	36.41	272.45	45.84	37.56	7.03
41321	2019-06-28 12:45:00:000	36.41	271.75	45.84	37.61	7.02
41322	2019-06-28 13:00:00:000	36.41	271.75	45.84	37.63	7.0
41323	2019-06-28 13:15:00:000	36.4	271.75	45.84	37.67	7.01
41324	2019-06-28 13:30:00:000	36.28	272	45.84	37.7	7.01
41325	2019-06-28 13:45:00:000	36.46	273.0	46.97	37.7	7
41326	2019-06-28 14:00:00:000	35.73	268.38	43.98	37.7	7.0
41327	2019-06-28 14:15:00:000	36.25	270.5	45.64	37.7	7.01
41328	2019-06-28 14:30:00:000	36.25	272.25	45.84	37.71	7.02
41329	2019-06-28 14:45:00:000	37.0	273.32	47.25	37.71	7.02
41330	2019-06-28 15:00:00:000	37.19	274.7	47.25	37.7	7.02
41331	2019-06-28 15:15:00:000	37.19	276.0	47.25	37.71	7.02
41332	2019-06-28 15:30:00:000	37.19	276.38	47.29	37.73	7.01
41333	2019-06-28 15:45:00:000	37.29	277.25	47.49	37.72	7.01
41334	2019-06-28 16:00:00:000	36.55	273.57	45.18	37.72	7.01
41335	2019-06-28 16:15:00:000	37.3	275.72	46.74	37.71	7.01
41336	2019-06-28 16:30:00:	37.84	278.67	47.53	37.71	7.01

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S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	.000					
41337	2019-06-28 16:45:00:000	38.28	279.67	47.53	37.7	7.02
41338	2019-06-28 17:00:00:000	38.28	280.0	47.53	37.68	7.03
41339	2019-06-28 17:15:00:000	38.12	279.17	47.53	37.67	7.04
41340	2019-06-28 17:30:00:000	38.28	280.09	47.53	37.66	7.05
41341	2019-06-28 17:45:00:000	38.28	281.5	47.53	37.63	7.05
41342	2019-06-28 18:00:00:000	38.34	282.57	47.53	37.6	7.03
41343	2019-06-28 18:15:00:000	38.44	282.37	47.53	37.54	7.02
41344	2019-06-28 18:30:00:000	38.37	280.67	47.53	37.53	7.03
41345	2019-06-28 18:45:00:000	37.59	278.95	47.55	37.54	7.03
41346	2019-06-28 19:00:00:000	37.66	277.53	47.55	37.52	7.03
41347	2019-06-28 19:15:00:000	37.66	275.5	47.57	37.5	7.04
41348	2019-06-28 19:30:00:000	36.78	273.3	46.74	37.49	7.05
41349	2019-06-28 19:45:00:000	36.78	272.08	46.13	37.48	7.05
41350	2019-06-28 20:00:00:000	36.82	272.48	46.55	37.47	7.04
41351	2019-06-28 20:15:00:000	36.84	273.22	47.1	37.44	7.04
41352	2019-06-28 20:30:00:000	36.83	272.13	46.13	37.43	7.04
41353	2019-06-28 20:45:00:000	36.81	272.2	46.13	37.41	7.05
41354	2019-06-28 21:00:00:000	37.13	272.88	46.89	37.4	7.04
41355	2019-06-28 21:15:00:000	37.66	275.02	47.66	37.39	7.05
41356	2019-06-28 21:30:00:000	37.66	276.25	47.66	37.33	7.06

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
41357	2019-06-28 21:45:00:000	37.66	276.25	47.63	37.3	7.06
41358	2019-06-28 22:00:00:000	37.66	275.33	47.66	37.29	7.06
41359	2019-06-28 22:15:00:000	37.66	275.0	47.68	37.28	7.05
41360	2019-06-28 22:30:00:000	37.66	273.62	47.74	37.27	7.05
41361	2019-06-28 22:45:00:000	37.66	274	47.76	37.25	7.05
41362	2019-06-28 23:00:00:000	37.66	275.0	45.67	37.25	7.05
41363	2019-06-28 23:15:00:000	37.66	275.5	46.13	37.28	7.05
41364	2019-06-28 23:30:00:000	37.14	273.08	46.13	37.28	7.04
41365	2019-06-28 23:45:00:000	36.86	270.98	46.13	37.28	7.04
41366	2019-06-29 00:00:00:000	36.88	270.08	46.13	37.28	7.04
41367	2019-06-29 00:15:00:000	36.86	269.5	46.13	37.29	7.04
41368	2019-06-29 00:30:00:000	36.88	271.12	46.13	37.3	7.04
41369	2019-06-29 00:45:00:000	37.45	272.83	46.13	37.31	7.05
41370	2019-06-29 01:00:00:000	36.98	270.8	44.92	37.31	7.05
41371	2019-06-29 01:15:00:000	37.34	273.55	46.44	37.32	7.05
41372	2019-06-29 01:30:00:000	38.23	278.5	47.74	37.33	7.05
41373	2019-06-29 01:45:00:000	38.44	281.17	47.74	37.33	7.05
41374	2019-06-29 02:00:00:000	38.44	282.93	47.93	37.34	7.05
41375	2019-06-29 02:15:00:000	38.44	284.38	49.22	37.35	7.05
41376	2019-06-29 02:30:00:	38.44	283.0	48.02	37.32	7.06

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
41737	2019-07-02 22:15:00:000	43.44	317.27	53.72	37.47	7.01
41738	2019-07-02 22:30:00:000	42.97	315.75	53.72	37.43	6.99
41739	2019-07-02 22:45:00:000	42.66	313.75	53.72	37.4	6.99
41740	2019-07-02 23:00:00:000	42.5	311.4	52.59	37.39	6.98
41741	2019-07-02 23:15:00:000	42.66	313.1	52.78	37.39	6.99
41742	2019-07-02 23:30:00:000	43.53	316.33	53.77	37.37	7
41743	2019-07-02 23:45:00:000	43.6	318.48	53.85	37.35	7
41744	2019-07-03 00:00:00:000	43.59	319.75	53.8	37.31	7.0
41745	2019-07-03 00:15:00:000	43.59	319.5	53.85	37.27	7.01
41746	2019-07-03 00:30:00:000	43.59	317.6	53.77	37.25	7.01
41747	2019-07-03 00:45:00:000	42.94	315.42	53.81	37.24	7.01
41748	2019-07-03 01:00:00:000	42.73	313.57	53.92	37.21	7.02
41749	2019-07-03 01:15:00:000	41.91	309.0	52.31	37.17	7.03
41750	2019-07-03 01:30:00:000	43.49	315.75	54.0	37.05	7.04
41751	2019-07-03 01:45:00:000	42.94	313.95	53.77	36.94	7.04
41752	2019-07-03 02:00:00:000	42.83	311.75	52.31	36.85	7.04
41753	2019-07-03 02:15:00:000	42.26	310.45	52.31	36.79	7.04
41754	2019-07-03 02:30:00:000	41.89	309.0	52.31	36.8	7.05
41755	2019-07-03 02:45:00:000	41.88	307.7	52.31	36.91	7.03
41756	2019-07-03 03:00:00:	41.88	307.42	52.31	36.97	7.01

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
41757	2019-07-03 03:15:00:000	41.88	305.48	52.31	37.0	6.97
41758	2019-07-03 03:30:00:000	41.41	303.67	51.75	37.01	6.95
41759	2019-07-03 03:45:00:000	41.09	301.57	50.91	37.01	6.93
41760	2019-07-03 04:00:00:000	41.09	299.85	50.91	37	6.92
41761	2019-07-03 04:15:00:000	40.78	298.58	50.91	37	6.91
41762	2019-07-03 04:30:00:000	40.16	297.64	50.91	37.0	6.9
41763	2019-07-03 04:45:00:000	40.16	296.73	50.91	36.98	6.9
41764	2019-07-03 05:00:00:000	40.16	296.63	50.91	36.98	6.88
41765	2019-07-03 05:15:00:000	40.16	295.25	50.91	36.97	6.87
41766	2019-07-03 05:30:00:000	40.16	295.07	50.91	36.96	6.87
41767	2019-07-03 05:45:00:000	40.17	294	50.91	36.96	6.86
41768	2019-07-03 06:00:00:000	40.16	294.0	50.91	36.95	6.86
41769	2019-07-03 06:15:00:000	40.16	294.83	50.91	36.96	6.86
41770	2019-07-03 06:30:00:000	40.17	295.25	50.91	36.95	6.87
41771	2019-07-03 06:45:00:000	40.16	296.5	50.91	36.95	6.87
41772	2019-07-03 07:00:00:000	39.97	294.2	49.56	36.94	6.87
41773	2019-07-03 07:15:00:000	40.59	296.6	50.53	36.95	6.88
41774	2019-07-03 07:30:00:000	40.94	300.45	50.74	36.97	6.88
41775	2019-07-03 07:45:00:000	40.92	302.43	51.22	36.97	6.88
41776	2019-07-03 08:00:00:	40.11	298.46	49.46	36.97	6.88

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S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
41777	2019-07-03 08:15:00:000	41.01	300.25	50.62	36.98	6.59
41778	2019-07-03 08:30:00:000	41.72	304.0	52.31	36.99	6.59
41779	2019-07-03 08:45:00:000	42.66	310.12	52.17	36.98	6.76
41780	2019-07-03 09:00:00:000	42.55	310.77	52.12	36.92	6.76
41781	2019-07-03 09:15:00:000	42.5	311.95	52.65	36.93	6.66
41782	2019-07-03 09:30:00:000	42.5	312.75	53.68	36.96	6.66
41783	2019-07-03 09:45:00:000	42.5	312.75	53.7	36.99	6.62
41784	2019-07-03 10:00:00:000	41.75	308.6	51.02	37.03	6.64
41785	2019-07-03 10:15:00:000	41.56	308.0	52.03	37.07	6.69
41786	2019-07-03 10:30:00:000	41.66	308.6	51.97	37.12	6.72
41787	2019-07-03 10:45:00:000	41.63	308.31	52.03	37.11	6.76
41788	2019-07-03 11:00:00:000	41.06	302.64	51.08	37.09	6.81
41789	2019-07-03 11:15:00:000	42.15	310.38	51.82	37.2	6.21
41790	2019-07-03 11:30:00:000	39.51	293.85	49.03	35.14	6.57
41791	2019-07-03 11:45:00:000	41.44	304.75	51.75	37.01	6.59
41792	2019-07-03 12:00:00:000	42.27	309.63	51.91	37.42	6.82
41793	2019-07-03 12:15:00:000	42.39	311.25	51.92	37.4	6.78
41794	2019-07-03 12:30:00:000	42.47	311.07	51.99	37.4	6.46
41795	2019-07-03 12:45:00:000	41.9	309.75	51.87	37.47	6.46
41796	2019-07-03 13:00:00:000	41.41	308.83	51.75	37.53	6.46

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
41797	2019-07-03 13:15:00:000	41.41	308.13	51.81	37.56	6.5
41798	2019-07-03 13:30:00:000	41.41	307.09	51.75	37.61	6.54
41799	2019-07-03 13:45:00:000	41.41	307.03	51.75	37.66	6.55
41800	2019-07-03 14:00:00:000	41.41	307.05	51.75	37.7	6.54
41801	2019-07-03 14:15:00:000	41.41	307.03	51.75	37.74	6.52
41802	2019-07-03 14:30:00:000	41.41	306.68	51.75	37.76	6.51
41803	2019-07-03 14:45:00:000	41.41	305.31	51.75	37.76	6.5
41804	2019-07-03 15:00:00:000	41.41	305.08	51.75	37.76	6.48
41805	2019-07-03 15:15:00:000	41.41	304.27	51.75	37.75	6.49
41806	2019-07-03 15:30:00:000	41.28	303	51.56	37.74	6.51
41807	2019-07-03 15:45:00:000	40.86	303.0	50.91	37.73	6.53
41808	2019-07-03 16:00:00:000	40.55	301.96	50.34	37.73	6.53
41809	2019-07-03 16:15:00:000	40.47	302.12	50.34	37.73	6.53
41810	2019-07-03 16:30:00:000	40.5	301.87	50.34	37.72	6.54
41811	2019-07-03 16:45:00:000	40.59	301.65	50.34	37.7	6.54
41812	2019-07-03 17:00:00:000	40.63	301.75	50.34	37.69	6.51
41813	2019-07-03 17:15:00:000	41.12	303	51.23	37.67	6.48
41814	2019-07-03 17:30:00:000	41.41	303	51.73	37.65	6.48
41815	2019-07-03 17:45:00:000	40.63	303	50.34	37.63	6.48
41816	2019-07-03 18:00:00:	40.63	303	50.34	37.62	6.47

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
41817	2019-07-03 18:15:00:000	41.37	303.0	51.66	37.6	6.48
41818	2019-07-03 18:30:00:000	41.61	304.1	52.01	37.59	6.49
41819	2019-07-03 18:45:00:000	41.7	305.47	52.03	37.57	6.5
41820	2019-07-03 19:00:00:000	39.91	297.17	49.24	37.56	6.52
41821	2019-07-03 19:15:00:000	41.63	303.77	51.71	37.53	6.54
41822	2019-07-03 19:30:00:000	43.09	313.77	53.72	37.5	6.56
41823	2019-07-03 19:45:00:000	43.75	320.65	54.28	37.49	6.54
41824	2019-07-03 20:00:00:000	44.34	325.1	55.13	37.48	6.56
41825	2019-07-03 20:15:00:000	45.47	330.85	56.36	37.45	6.59
41826	2019-07-03 20:30:00:000	46.51	338.28	57.38	37.41	6.52
41827	2019-07-03 20:45:00:000	47.75	345.93	58.88	37.37	6.53
41828	2019-07-03 21:00:00:000	46	339.05	56.65	37.34	6.54
41829	2019-07-03 21:15:00:000	48.0	347.7	58.76	37.3	6.57
41830	2019-07-03 21:30:00:000	49.66	359.45	60.92	37.26	6.58
41831	2019-07-03 21:45:00:000	50.58	366.56	61.85	37.24	6.56
41832	2019-07-03 22:00:00:000	51.25	371.38	63.22	37.22	6.57
41833	2019-07-03 22:15:00:000	51.82	376.33	63.71	37.21	6.61
41834	2019-07-03 22:30:00:000	52.04	379.21	64.69	37.19	6.65
41835	2019-07-03 22:45:00:000	52.04	380.7	64.69	37.19	6.65
41836	2019-07-03 23:00:00:	52.03	381	64.69	37.18	6.66

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S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
41837	2019-07-03 23:15:00:000	52.03	381.0	64.69	37.16	6.68
41838	2019-07-03 23:30:00:000	52.03	379.97	64.69	37.16	6.7
41839	2019-07-03 23:45:00:000	52.03	380	64.69	37.15	6.71
41840	2019-07-04 00:00:00:000	52.03	381.0	64.69	37.13	6.71
41841	2019-07-04 00:15:00:000	52.9	382.16	64.69	37.13	6.72
41842	2019-07-04 00:30:00:000	52.97	383.02	64.69	37.12	6.73
41843	2019-07-04 00:45:00:000	52.97	384.98	64.69	37.12	6.73
41844	2019-07-04 01:00:00:000	53.17	387.38	65.29	37.12	6.73
41845	2019-07-04 01:15:00:000	53.91	390.62	66.11	37.12	6.74
41846	2019-07-04 01:30:00:000	54.32	393.9	66.11	37.12	6.75
41847	2019-07-04 01:45:00:000	54.69	397.8	67.56	37.11	6.76
41848	2019-07-04 02:00:00:000	55.4	401.32	67.78	37.11	6.77
41849	2019-07-04 02:15:00:000	55.53	403.98	67.78	37.11	6.77
41850	2019-07-04 02:30:00:000	56.3	406.88	69.0	37.11	6.78
41851	2019-07-04 02:45:00:000	56.41	408.25	69.19	37.12	6.79
41852	2019-07-04 03:00:00:000	56.42	407.07	68.99	37.11	6.82
41853	2019-07-04 03:15:00:000	55.65	406.08	67.78	37.11	6.79
41854	2019-07-04 03:30:00:000	55.58	403.87	67.78	37.1	6.78
41855	2019-07-04 03:45:00:000	55.32	402.17	67.78	37.1	6.77
41856	2019-07-04 04:00:00:000	51.6	384.13	63.19	37.1	6.77

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
44297	2019-07-29 23:30:00:000	43.49	336.43	48.51	26.94	7.78
44298	2019-07-29 23:45:00:000	43.75	338.2	48.58	27.08	7.71
44299	2019-07-30 00:00:00:000	43.75	339.42	48.6	28.0	7.18
44300	2019-07-30 00:15:00:000	43.75	339.58	48.58	27.71	7.18
44301	2019-07-30 00:30:00:000	43.18	336.05	48.62	36.11	7.37
44302	2019-07-30 00:45:00:000	42.97	333.43	48.64	36.11	7.7
44303	2019-07-30 01:00:00:000	42.97	332.35	48.62	36.12	7.77
44304	2019-07-30 01:15:00:000	42.97	333.65	48.62	36.11	7.74
44305	2019-07-30 01:30:00:000	42.97	335.0	48.64	36.1	7.29
44306	2019-07-30 01:45:00:000	42.97	334.55	48.64	36.08	7.03
44307	2019-07-30 02:00:00:000	42.8	332.93	48.62	36.06	7.16
44308	2019-07-30 02:15:00:000	42.36	331.15	47.4	36.04	6.98
44309	2019-07-30 02:30:00:000	42.47	330.75	47.64	36.04	6.84
44310	2019-07-30 02:45:00:000	42.86	331.07	48.42	36.02	6.74
44311	2019-07-30 03:00:00:000	42.54	330.77	47.76	36.02	6.69
44312	2019-07-30 03:15:00:000	42.19	329.42	46.97	36.0	6.83
44313	2019-07-30 03:30:00:000	42.19	327.15	46.97	35.98	6.95
44314	2019-07-30 03:45:00:000	42.19	326.75	46.95	35.96	7.03
44315	2019-07-30 04:00:00:000	41.96	325.39	46.97	35.94	7.23
44316	2019-07-30 04:15:00:	41.84	324	46.95	35.94	7.01

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
44317	2019-07-30 04:30:00:000	41.62	324.0	46.97	35.93	6.88
44318	2019-07-30 04:45:00:000	41.25	322.37	46.97	35.91	6.84
44319	2019-07-30 05:00:00:000	41.26	321.33	46.97	35.91	6.72
44320	2019-07-30 05:15:00:000	41.26	320.87	46.16	35.9	6.61
44321	2019-07-30 05:30:00:000	41.28	319.96	45.5	35.89	6.51
44322	2019-07-30 05:45:00:000	41.3	319.4	45.43	35.9	6.74
44323	2019-07-30 06:00:00:000	40.44	316.75	45.47	35.9	7.56
44324	2019-07-30 06:15:00:000	40.44	314.6	45.53	35.88	7.19
44325	2019-07-30 06:30:00:000	40.44	314.55	45.43	35.85	6.99
44326	2019-07-30 06:45:00:000	40.4	315.9	45.47	35.83	6.89
44327	2019-07-30 07:00:00:000	40.4	316.83	45.32	35.82	6.77
44328	2019-07-30 07:15:00:000	41.25	318.32	45.38	35.81	6.7
44329	2019-07-30 07:30:00:000	41.24	319.95	45.34	35.82	6.76
44330	2019-07-30 07:45:00:000	41.2	319.83	45.32	35.83	7.23
44331	2019-07-30 08:00:00:000	41.23	319.43	45.28	35.82	7.39
44332	2019-07-30 08:15:00:000	41.24	319.37	45.88	35.79	6.53
44333	2019-07-30 08:30:00:000	41.24	322.25	46.97	35.76	6.44
44334	2019-07-30 08:45:00:000	41.23	322.43	46.97	35.76	6.54
44335	2019-07-30 09:00:00:000	41.21	320.43	45.28	35.75	6.62
44336	2019-07-30 09:15:00:	41.23	320.13	45.6	35.74	6.72

221 860

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
44337	2019-07-30 09:30:00:000	41.14	319.85	45.28	35.74	6.79
44338	2019-07-30 09:45:00:000	41.14	319.75	45.3	35.72	7.18
44339	2019-07-30 10:00:00:000	40.57	318.15	45.28	35.71	7.46
44340	2019-07-30 10:15:00:000	40.31	317.22	45.28	35.72	7.16
44341	2019-07-30 10:30:00:000	40.31	317.25	45.28	35.72	6.99
44342	2019-07-30 10:45:00:000	40.31	317.25	45.28	35.72	6.85
44343	2019-07-30 11:00:00:000	40.31	317.22	45.28	35.77	6.73
44344	2019-07-30 11:15:00:000	40.31	317.15	45.28	35.79	6.73
44345	2019-07-30 11:30:00:000	40.31	315.93	45.28	35.79	6.68
44346	2019-07-30 11:45:00:000	40.31	315.75	45.28	35.77	6.72
44347	2019-07-30 12:00:00:000	40.31	315.25	45.28	35.76	6.71
44348	2019-07-30 12:15:00:000	40.31	313.2	45.28	35.78	6.58
44349	2019-07-30 12:30:00:000	40.31	312.03	45.28	35.79	6.72
44350	2019-07-30 12:45:00:000	39.5	310.29	44.85	35.8	6.77
44351	2019-07-30 13:00:00:000	39.41	308.17	43.88	35.8	7.94
44352	2019-07-30 13:15:00:000	39.43	307.75	43.88	35.81	7.17
44353	2019-07-30 13:30:00:000	39.42	307.73	43.88	35.84	7.44
44354	2019-07-30 13:45:00:000	39.4	307.75	43.88	35.87	6.69
44355	2019-07-30 14:00:00:000	39.4	307.73	43.88	35.9	7.48
44356	2019-07-30 14:15:00:	39.41	307.73	43.88	35.9	7.28

222 861

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
44357	2019-07-30 14:30:00:000	39.47	307.75	43.88	35.91	6.88
44358	2019-07-30 14:45:00:000	39.42	307.72	43.88	35.92	6.93
44359	2019-07-30 15:00:00:000	39.48	307.75	43.88	35.92	6.83
44360	2019-07-30 15:15:00:000	39.47	307.75	43.88	35.92	6.82
44361	2019-07-30 15:30:00:000	39.47	306.29	43.88	35.92	6.77
44362	2019-07-30 15:45:00:000	39.48	307.17	43.88	35.92	6.76
44363	2019-07-30 16:00:00:000	38.91	305.42	43.88	35.94	6.97
44364	2019-07-30 16:15:00:000	39.52	308.55	44.18	35.94	6.88
44365	2019-07-30 16:30:00:000	39.48	309.52	44.44	35.95	6.71
44366	2019-07-30 16:45:00:000	40.08	310.78	45.28	35.95	6.87
44367	2019-07-30 17:00:00:000	40.31	312.22	45.28	35.95	6.87
44368	2019-07-30 17:15:00:000	40.31	314.75	45.28	35.96	6.96
44369	2019-07-30 17:30:00:000	40.31	315.75	45.28	35.97	7.38
44370	2019-07-30 17:45:00:000	40.31	315.87	45.28	35.97	6.89
44371	2019-07-30 18:00:00:000	40.99	318.32	45.62	35.97	7.02
44372	2019-07-30 18:15:00:000	41.09	319.96	46.93	35.96	7.17
44373	2019-07-30 18:30:00:000	41.09	321.73	46.95	35.95	7.16
44374	2019-07-30 18:45:00:000	41.11	321.6	46.93	35.94	6.99
44375	2019-07-30 19:00:00:000	41.11	321.93	46.97	35.93	6.8
44376	2019-07-30 19:15:00:	41.15	322.7	46.97	35.92	7.07

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
44377	2019-07-30 19:30:00:000	41.19	323.33	46.97	35.89	6.99
44378	2019-07-30 19:45:00:000	41.9	324.5	46.97	35.87	6.54
44379	2019-07-30 20:00:00:000	42.06	325.25	46.97	35.86	6.52
44380	2019-07-30 20:15:00:000	42.03	325.25	46.95	35.86	6.75
44381	2019-07-30 20:30:00:000	42.05	325.27	46.95	35.85	7.07
44382	2019-07-30 20:45:00:000	42.05	324.93	46.95	35.84	6.66
44383	2019-07-30 21:00:00:000	42.08	324.53	46.97	35.82	6.53
44384	2019-07-30 21:15:00:000	41.76	324.5	46.97	35.82	7.44
44385	2019-07-30 21:30:00:000	41.97	324.0	46.97	35.81	6.88
44386	2019-07-30 21:45:00:000	41.24	322.85	46.97	35.82	6.89
44387	2019-07-30 22:00:00:000	41.24	322.75	46.97	35.83	6.83
44388	2019-07-30 22:15:00:000	41.31	323.08	46.99	35.84	6.69
44389	2019-07-30 22:30:00:000	42.13	324.65	46.97	35.85	6.62
44390	2019-07-30 22:45:00:000	42.15	326.32	46.97	27.66	7.27
44391	2019-07-30 23:00:00:000	42.14	329.08	47.53	27.51	7.29
44392	2019-07-30 23:15:00:000	42.72	331.45	48.64	27.3	7.3
44393	2019-07-30 23:30:00:000	42.97	332.23	48.66	27.17	7.31
44394	2019-07-30 23:45:00:000	42.97	332.88	48.6	27.1	7.31
44395	2019-07-31 00:00:00:000	42.97	333.65	48.66	26.98	7.31
44396	2019-07-31 00:15:00:	42.97	333.68	48.66	26.84	7.31

224 863
ETP_1 pH (pH)(avg)

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
45477	2019-10-06 23:00:00:000	28.3	324.09	39.09	35.41	6.83
45478	2019-10-06 23:15:00:000	27.81	318.98	37.69	35.42	6.84
45479	2019-10-06 23:30:00:000	27.73	317.55	37.63	35.42	6.84
45480	2019-10-06 23:45:00:000	28.28	321.17	39.09	35.41	6.84
45481	2019-10-07 00:00:00:000	29.0	327.38	39.45	35.4	6.84
45482	2019-10-07 00:15:00:000	30.13	338.85	40.5	35.38	6.83
45483	2019-10-07 00:30:00:000	30.87	345.35	41.55	35.37	6.83
45484	2019-10-07 00:45:00:000	30.94	350.92	42.13	35.36	6.82
45485	2019-10-07 01:00:00:000	31.72	355.97	40.98	35.35	6.82
45486	2019-10-07 01:15:00:000	31.73	358.4	42.23	35.34	6.81
45487	2019-10-07 01:30:00:000	31.67	358.46	43.01	35.34	6.82
45488	2019-10-07 01:45:00:000	30.45	348.35	41.15	35.36	6.83
45489	2019-10-07 02:00:00:000	29.47	336.71	39.91	35.39	6.84
45490	2019-10-07 02:15:00:000	29.22	332.5	39.56	35.4	6.85
45491	2019-10-07 02:30:00:000	29.77	336.03	40.5	35.41	6.85
45492	2019-10-07 02:45:00:000	30.16	339.86	40.5	35.4	6.85
45493	2019-10-07 03:00:00:000	30.6	343.75	40.74	35.38	6.84
45494	2019-10-07 03:15:00:000	31.0	354.25	41.99	35.37	6.8
45495	2019-10-07 03:30:00:000	31.72	357.28	42.78	35.35	6.76
45496	2019-10-07 03:45:00:	31.72	360.94	43.66	35.33	6.73

225 **864**
ETP_1 pH (pH)(avg)

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
45497	2019-10-07 04:00:00:000	31.73	362.25	43.77	35.31	6.71
45498	2019-10-07 04:15:00:000	32.2	363.44	43.76	35.3	6.71
45499	2019-10-07 04:30:00:000	32.08	362.54	43.63	35.3	6.72
45500	2019-10-07 04:45:00:000	30.98	353.0	41.72	35.33	6.76
45501	2019-10-07 05:00:00:000	29.7	340.17	40.5	35.35	6.78
45502	2019-10-07 05:15:00:000	29.26	335.02	40.5	35.37	6.8
45503	2019-10-07 05:30:00:000	30.06	337.28	40.5	35.37	6.8
45504	2019-10-07 05:45:00:000	30.16	340.5	40.5	35.37	6.8
45505	2019-10-07 06:00:00:000	30.16	340.17	40.52	35.36	6.8
45506	2019-10-07 06:15:00:000	30.22	341.92	40.57	35.35	6.8
45507	2019-10-07 06:30:00:000	30.94	347.48	42.03	35.33	6.8
45508	2019-10-07 06:45:00:000	31.17	352.16	42.19	35.32	6.79
45509	2019-10-07 07:00:00:000	31.21	353.98	42.11	35.31	6.79
45510	2019-10-07 07:15:00:000	30.55	348.62	41.46	35.3	6.8
45511	2019-10-07 07:30:00:000	29.91	341.75	40.5	35.31	6.8
45512	2019-10-07 07:45:00:000	29.86	340.25	40.5	35.31	6.8
45513	2019-10-07 08:00:00:000	30.42	344.0	39.99	35.3	6.8
45514	2019-10-07 08:15:00:000	30.63	345.75	40.39	35.29	6.8
45515	2019-10-07 08:30:00:000	30.64	345.97	40.89	35.28	6.8
45516	2019-10-07 08:45:00:	30.63	347.95	41.91	35.28	6.79

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
45517	2019-10-07 09:00:00:000	31.25	353.35	40.58	35.28	6.79
45518	2019-10-07 09:15:00:000	30.97	354.72	41.91	35.28	6.78
45519	2019-10-07 09:30:00:000	30.55	350.25	41.78	35.31	6.79
45520	2019-10-07 09:45:00:000	29.74	341.16	40.22	35.36	6.8
45521	2019-10-07 10:00:00:000	28.85	334.58	40.25	35.4	6.8
45522	2019-10-07 10:15:00:000	28.81	332.5	40.25	35.43	6.81
45523	2019-10-07 10:30:00:000	29.33	335.55	40.22	35.48	6.8
45524	2019-10-07 10:45:00:000	29.69	338.75	40.22	35.52	6.8
45525	2019-10-07 11:00:00:000	30.31	346.58	40.22	35.55	6.79
45526	2019-10-07 11:15:00:000	30.52	350.57	40.98	35.59	6.72
45527	2019-10-07 11:30:00:000	30.47	351.5	41.65	35.64	6.65
45528	2019-10-07 11:45:00:000	30.47	352.81	41.72	35.66	6.62
45529	2019-10-07 12:00:00:000	30.48	352.27	41.72	35.73	6.56
45530	2019-10-07 12:15:00:000	30.47	352.3	41.68	35.78	6.58
45531	2019-10-07 12:30:00:000	30.45	351.95	41.7	35.8	6.62
45532	2019-10-07 12:45:00:000	30.03	344.42	40.88	35.86	6.65
45533	2019-10-07 13:00:00:000	28.75	331.23	38.87	35.94	6.7
45534	2019-10-07 13:15:00:000	28.73	329.11	39.25	35.99	6.71
45535	2019-10-07 13:30:00:000	29.78	339.55	40.5	36.01	6.71
45536	2019-10-07 13:45:00:000	30.43	345.48	41.65	36.01	6.71

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
45537	2019-10-07 14:00:00:000	30.42	349.92	40.57	36.01	6.72
45538	2019-10-07 14:15:00:000	30.39	349.48	40.69	36.03	6.72
45539	2019-10-07 14:30:00:000	30.44	350.93	41.68	36.02	6.71
45540	2019-10-07 14:45:00:000	31.04	354.89	41.66	36.0	6.71
45541	2019-10-07 15:00:00:000	31.38	357.56	43.17	35.98	6.71
45542	2019-10-07 15:15:00:000	31.41	357.8	43.31	35.96	6.71
45543	2019-10-07 15:30:00:000	31.39	356.68	42.01	35.94	6.71
45544	2019-10-07 15:45:00:000	31.26	355.88	41.72	35.91	6.71
45545	2019-10-07 16:00:00:000	30.48	354.52	41.67	35.9	6.72
45546	2019-10-07 16:15:00:000	30.47	352.32	41.71	35.89	6.72
45547	2019-10-07 16:30:00:000	29.84	343.85	40.5	35.89	6.74
45548	2019-10-07 16:45:00:000	28.98	336.72	40.25	35.9	6.75
45549	2019-10-07 17:00:00:000	28.75	334.64	40.22	35.9	6.75
45550	2019-10-07 17:15:00:000	29.5	335.8	40.22	35.89	6.76
45551	2019-10-07 17:30:00:000	29.4	335.87	40.22	35.87	6.76
45552	2019-10-07 17:45:00:000	28.75	332.58	39.59	35.87	6.77
45553	2019-10-07 18:00:00:000	29.67	336.25	38.81	35.86	6.77
45554	2019-10-07 18:15:00:000	29.69	337.82	39.99	35.85	6.78
45555	2019-10-07 18:30:00:000	30.01	342.41	40.4	35.83	6.78
45556	2019-10-07 18:45:00:	30.63	346.17	41.88	35.82	6.78

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
45557	2019-10-07 19:00:00:000	30.63	350.45	41.91	35.81	6.77
45558	2019-10-07 19:15:00:000	30.78	353.12	41.91	35.81	6.77
45559	2019-10-07 19:30:00:000	31.46	356.46	42.84	35.81	6.77
45560	2019-10-07 19:45:00:000	31.48	359.31	43.36	35.8	6.76
45561	2019-10-07 20:00:00:000	32.19	365.16	42.55	35.79	6.76
45562	2019-10-07 20:15:00:000	32.61	370.46	43.7	35.77	6.74
45563	2019-10-07 20:30:00:000	33.28	374.1	44.98	35.76	6.74
45564	2019-10-07 20:45:00:000	22.19	283.85	29.42	35.77	6.75
45565	2019-10-07 21:00:00:000	23.71	270.31	32.34	35.79	6.76
45566	2019-10-07 21:15:00:000	29.24	322.4	39.82	35.79	6.76
45567	2019-10-07 21:30:00:000	30.7	343.84	41.91	35.79	6.76
45568	2019-10-07 21:45:00:000	30.66	349.6	41.91	35.79	6.76
45569	2019-10-07 22:00:00:000	30.66	350.1	41.91	35.79	6.76
45570	2019-10-07 22:15:00:000	30.7	351.25	41.91	35.78	6.75
45571	2019-10-07 22:30:00:000	30.69	352.32	41.91	35.78	6.75
45572	2019-10-07 22:45:00:000	30.76	353.89	41.91	35.77	6.74
45573	2019-10-07 23:00:00:000	30.73	352.92	41.91	35.77	6.74
45574	2019-10-07 23:15:00:000	30.64	347.75	41.77	35.78	6.74
45575	2019-10-07 23:30:00:000	29.84	344.43	40.5	35.77	6.74
45576	2019-10-07 23:45:00:	29.84	344.5	40.5	35.77	6.75

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
49877	2019-12-22 19:15:00:000	25.92	398.53	35.19	32.96	7.16
49878	2019-12-22 19:30:00:000	25.94	398.45	35.21	32.95	7.15
49879	2019-12-22 19:45:00:000	25.94	398.5	35.16	32.94	7.14
49880	2019-12-22 20:00:00:000	25.92	398.63	35.21	32.93	7.14
49881	2019-12-22 20:15:00:000	26.29	403.53	35.62	32.92	7.14
49882	2019-12-22 20:30:00:000	25.68	396.12	34.79	32.88	7.13
49883	2019-12-22 20:45:00:000	24.79	381.53	33.24	32.85	7.11
49884	2019-12-22 21:00:00:000	24.05	372.55	32.59	32.83	7.07
49885	2019-12-22 21:15:00:000	25.86	396.03	34.97	32.82	7.05
49886	2019-12-22 21:30:00:000	24.72	380.02	33.51	32.8	7.04
49887	2019-12-22 21:45:00:000	26.4	400.9	35.36	32.82	7.05
49888	2019-12-22 22:00:00:000	23.1	355.67	30.96	32.84	7.06
49889	2019-12-22 22:15:00:000	24.12	369.31	32.56	32.84	7.09
49890	2019-12-22 22:30:00:000	22.88	350.93	30.81	32.82	7.1
49891	2019-12-22 22:45:00:000	22.92	353.08	31.01	32.81	7.09
49892	2019-12-22 23:00:00:000	23.55	363.55	31.89	32.81	7.08
49893	2019-12-22 23:15:00:000	22.4	345.47	30.28	32.8	7.09
49894	2019-12-22 23:30:00:000	23.39	361.41	31.78	32.74	7.08
49895	2019-12-22 23:45:00:000	23.43	363.4	31.91	32.47	7.02
49896	2019-12-23 00:00:00:	25.53	391.57	34.65	32.3	6.96

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
49897	2019-12-23 00:15:00:000	23.57	360.3	31.8	32.35	6.98
49898	2019-12-23 00:30:00:000	23.54	363.55	31.91	32.51	7.04
49899	2019-12-23 00:45:00:000	23.59	360.63	31.89	32.6	7.06
49900	2019-12-23 01:00:00:000	23.58	359.92	31.89	32.67	7.1
49901	2019-12-23 01:15:00:000	24.75	377.91	33.65	32.71	7.13
49902	2019-12-23 01:30:00:000	26.16	401.78	36.11	32.72	7.13
49903	2019-12-23 01:45:00:000	26.09	400.07	35.91	32.73	7.13
49904	2019-12-23 02:00:00:000	21.05	324.23	27.28	32.75	7.17
49905	2019-12-23 02:15:00:000	25.92	393.87	35.17	32.76	7.19
49906	2019-12-23 02:30:00:000	26.12	398.68	35.89	32.73	7.2
49907	2019-12-23 02:45:00:000	26.12	400.02	35.96	32.71	7.19
49908	2019-12-23 03:00:00:000	26.09	399.98	35.94	32.73	7.21
49909	2019-12-23 03:15:00:000	26.09	400.13	35.91	32.74	7.23
49910	2019-12-23 03:30:00:000	26.09	401.48	36.0	32.71	7.23
49911	2019-12-23 03:45:00:000	26.96	406.43	36.47	32.66	7.22
49912	2019-12-23 04:00:00:000	27.03	410.45	36.84	32.64	7.22
49913	2019-12-23 04:15:00:000	25.43	385.52	34.41	32.67	7.24
49914	2019-12-23 04:30:00:000	17.26	267.65	22.5	32.71	7.26
49915	2019-12-23 04:45:00:000	26.0	394.8	35.32	32.73	7.27
49916	2019-12-23 05:00:00:000	26.09	395.96	35.44	32.72	7.27

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S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
49917	2019-12-23 05:15:00:000	26.11	395.04	35.44	32.68	7.26
49918	2019-12-23 05:30:00:000	26.09	394.65	35.44	32.66	7.27
49919	2019-12-23 05:45:00:000	26.09	395.4	35.44	32.68	7.27
49920	2019-12-23 06:00:00:000	26.09	395.4	35.44	32.67	7.27
49921	2019-12-23 06:15:00:000	25.22	388.52	34.76	32.72	7.3
49922	2019-12-23 06:30:00:000	25.24	386.67	34.69	32.69	7.3
49923	2019-12-23 06:45:00:000	25.46	391.46	35.1	32.64	7.28
49924	2019-12-23 07:00:00:000	26.1	395.32	35.53	32.62	7.28
49925	2019-12-23 07:15:00:000	26.09	396.5	35.44	32.61	7.27
49926	2019-12-23 07:30:00:000	26.11	399.3	35.96	32.57	7.26
49927	2019-12-23 07:45:00:000	26.91	404.6	36.3	32.55	7.26
49928	2019-12-23 08:00:00:000	27.03	406.92	36.6	32.53	7.27
49929	2019-12-23 08:15:00:000	27.02	406.25	36.58	32.52	7.26
49930	2019-12-23 08:30:00:000	27.03	406.9	36.62	32.51	7.25
49931	2019-12-23 08:45:00:000	27.03	405.68	36.6	32.5	7.25
49932	2019-12-23 09:00:00:000	27.03	406.75	36.71	32.51	7.25
49933	2019-12-23 09:15:00:000	26.84	404.43	36.38	32.52	7.25
49934	2019-12-23 09:30:00:000	26.24	398.97	35.87	32.63	7.27
49935	2019-12-23 09:45:00:000	24.63	374.58	33.71	32.81	7.34
49936	2019-12-23 10:00:00:	24.06	370.68	33.04	32.78	7.31

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
49937	2019-12-23 10:15:00:000	16.17	252.15	18.9	32.15	7.09
49938	2019-12-23 10:30:00:000	16.29	253.82	20.21	32.34	7.12
49939	2019-12-23 10:45:00:000	25.57	390.25	35.02	32.76	7.25
49940	2019-12-23 11:00:00:000	25.99	396.45	35.72	32.62	7.15
49941	2019-12-23 11:15:00:000	26.59	405.05	36.49	32.67	7.12
49942	2019-12-23 11:30:00:000	26.44	402.88	36.24	32.57	7.1
49943	2019-12-23 11:45:00:000	27.26	413.08	37.18	32.65	7.09
49944	2019-12-23 12:00:00:000	24.63	376.67	33.14	32.98	7.17
49945	2019-12-23 12:15:00:000	22.33	343.37	28.95	33.04	7.21
49946	2019-12-23 12:30:00:000	30.67	466.13	34.11	32.94	7.18
49947	2019-12-23 12:45:00:000	25.04	384.12	31.78	33.61	7.44
49948	2019-12-23 13:00:00:000	15.75	247.52	21.54	34.35	7.69
49949	2019-12-23 13:15:00:000	14.39	229.64	20.03	34.46	7.67
49950	2019-12-23 13:30:00:000	14.97	233.33	20.14	34.45	7.63
49951	2019-12-23 13:45:00:000	15.96	250.1	21.68	34.22	7.56
49952	2019-12-23 14:00:00:000	21.58	333.27	29.46	32.68	7.06
49953	2019-12-23 14:15:00:000	23.14	358.82	31.63	31.87	6.73
49954	2019-12-23 14:30:00:000	23.7	366.32	32.17	31.41	6.48
49955	2019-12-23 14:45:00:000	23.78	367.34	32.26	31.51	6.48
49956	2019-12-23 15:00:00:	26.42	402.1	35.74	32.57	6.94

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
49957	2019-12-23 15:15:00:000	22.84	354.15	31.29	33.1	7.17
49958	2019-12-23 15:30:00:000	24.22	372.62	32.49	33.15	7.2
49959	2019-12-23 15:45:00:000	26.47	405.82	35.81	32.58	6.91
49960	2019-12-23 16:00:00:000	27.73	422.03	37.74	32.7	6.94
49961	2019-12-23 16:15:00:000	23.77	364.72	32.46	33.16	7.16
49962	2019-12-23 16:30:00:000	21.81	338.38	29.93	33.25	7.23
49963	2019-12-23 16:45:00:000	21.72	337.75	29.81	33.12	7.18
49964	2019-12-23 17:30:00:000	21.99	343.94	24.4	32.27	6.76
49965	2019-12-23 17:45:00:000	17.23	272.03	20.12	32.18	6.79
49966	2019-12-23 18:00:00:000	30.07	441.72	40.78	31.76	6.64
49967	2019-12-23 18:15:00:000	24.99	385.12	34.16	31.89	6.69
49968	2019-12-23 18:30:00:000	30.97	463.52	42.13	32.22	6.8
49969	2019-12-23 18:45:00:000	30.5	462.48	41.27	32.41	6.86
49970	2019-12-23 19:00:00:000	29.38	449.75	40.11	32.51	6.89
49971	2019-12-23 19:15:00:000	23.51	373.23	32.31	32.32	6.8
49972	2019-12-23 19:30:00:000	23.24	358.5	31.58	31.81	6.58
49973	2019-12-23 19:45:00:000	22.86	353.68	31.11	31.71	6.61
49974	2019-12-23 20:00:00:000	23.68	366.35	32.23	32.68	7.04
49975	2019-12-23 20:15:00:000	20.81	325.35	27.83	33.12	7.24
49976	2019-12-23 20:30:00:	23.24	353.02	31.52	33.07	7.18

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
49977	2019-12-23 20:45:00:000	23.05	357.63	31.61	33.17	7.18
49978	2019-12-23 21:00:00:000	22.5	350.5	30.98	33.18	7.16
49979	2019-12-23 21:15:00:000	22.5	348.6	30.84	33.2	7.13
49980	2019-12-23 21:30:00:000	22.5	348.8	30.94	33.21	7.09
49981	2019-12-23 21:45:00:000	22.5	347.98	30.94	33.18	7.06
49982	2019-12-23 22:00:00:000	22.5	348.67	30.94	33.16	7.04
49983	2019-12-23 22:15:00:000	22.5	346.85	30.73	33.18	7.04
49984	2019-12-23 22:30:00:000	22.5	345.37	30.68	33.17	7.05
49985	2019-12-23 22:45:00:000	22.5	348.63	30.94	33.15	7.04
49986	2019-12-23 23:00:00:000	22.5	345.58	30.56	33.19	7.06
49987	2019-12-23 23:15:00:000	21.72	338.3	29.92	33.24	7.09
49988	2019-12-23 23:30:00:000	21.59	331.68	29.29	33.31	7.12
49989	2019-12-23 23:45:00:000	21.4	328.53	29.18	33.18	7.09
49990	2019-12-24 00:00:00:000	24.8	375.48	34.03	32.56	6.85
49991	2019-12-24 00:15:00:000	23.54	363.38	31.86	32.03	6.65
49992	2019-12-24 00:30:00:000	23.44	359.68	31.78	31.68	6.51
49993	2019-12-24 00:45:00:000	23.73	365.6	32.16	31.42	6.41
49994	2019-12-24 01:00:00:000	24.36	368.6	32.48	31.15	6.28
49995	2019-12-24 01:15:00:000	24.38	369.9	32.86	21.88	7.43
49996	2019-12-24 01:30:00:	24.14	370.03	32.81	21.73	7.5

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
52417	2020-01-19 19:15:00:000	34.53	381.55	42.49	30.84	7.15
52418	2020-01-19 19:30:00:000	34.53	384.07	42.88	30.84	7.06
52419	2020-01-19 19:45:00:000	34.64	385.23	42.88	30.83	7.03
52420	2020-01-19 20:00:00:000	34.96	391.83	43.48	30.82	7.05
52421	2020-01-19 20:15:00:000	34.53	387.84	43.19	30.82	7.04
52422	2020-01-19 20:30:00:000	35.07	392.4	43.74	30.82	7.05
52423	2020-01-19 20:45:00:000	35.21	392.15	43.56	30.81	7.08
52424	2020-01-19 21:00:00:000	35.32	393.27	43.84	30.81	7.12
52425	2020-01-19 21:15:00:000	35.03	390.65	43.57	30.81	7.16
52426	2020-01-19 21:30:00:000	35.99	401.68	44.59	30.8	7.25
52427	2020-01-19 21:45:00:000	35.32	395.97	43.99	30.78	7.24
52428	2020-01-19 22:00:00:000	35.32	394.82	44.04	30.77	7.16
52429	2020-01-19 22:15:00:000	35.31	395.15	43.91	30.76	6.87
52430	2020-01-19 22:30:00:000	35.62	399.18	44.44	30.77	7.81
52431	2020-01-19 22:45:00:000	35.16	393.85	43.8	30.76	8.29
52432	2020-01-19 23:00:00:000	34.79	390.87	43.5	30.72	7.25
52433	2020-01-19 23:15:00:000	35.27	392.22	43.84	30.69	6.68
52434	2020-01-19 23:30:00:000	34.75	390.62	43.46	30.66	6.57
52435	2020-01-19 23:45:00:000	35.13	392.71	43.67	30.64	6.48
52436	2020-01-20 00:00:00:	34.92	390.8	43.54	30.62	6.53

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S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (avg)
	000					
52437	2020-01-20 00:15:00:000	34.77	389.75	43.46	30.6	6.63
52438	2020-01-20 00:30:00:000	34.53	386.78	43.24	30.6	6.76
52439	2020-01-20 00:45:00:000	34.66	387.65	43.31	30.57	6.95
52440	2020-01-20 01:00:00:000	34.53	387.27	43.31	30.54	7.07
52441	2020-01-20 01:15:00:000	34.53	387.17	43.27	30.51	7.05
52442	2020-01-20 01:30:00:000	34.86	388.77	43.41	30.49	6.91
52443	2020-01-20 01:45:00:000	35.31	394.41	43.9	30.47	6.81
52444	2020-01-20 02:00:00:000	34.58	388.8	43.35	30.48	6.76
52445	2020-01-20 02:15:00:000	34.53	383.75	42.84	30.47	6.74
52446	2020-01-20 02:30:00:000	34.48	386.25	43.12	30.45	6.7
52447	2020-01-20 02:45:00:000	34.17	382.32	42.83	30.43	6.63
52448	2020-01-20 03:00:00:000	34.53	385.92	43.16	30.43	6.59
52449	2020-01-20 03:15:00:000	34.38	383.3	42.81	30.43	6.59
52450	2020-01-20 03:30:00:000	34.11	380.93	42.49	30.41	6.58
52451	2020-01-20 03:45:00:000	33.75	377.82	42.27	30.39	6.54
52452	2020-01-20 04:00:00:000	34.22	380.72	42.64	30.39	6.5
52453	2020-01-20 04:15:00:000	34.32	383.0	42.81	30.36	6.51
52454	2020-01-20 04:30:00:000	34.22	380.77	42.54	30.34	6.61
52455	2020-01-20 04:45:00:000	34.27	381.07	42.66	30.3	6.65
52456	2020-01-20 05:00:00:000	34.01	379.05	42.32	30.3	6.65

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
52457	2020-01-20 05:15:00:000	33.64	373.35	41.81	30.29	6.67
52458	2020-01-20 05:30:00:000	32.95	370.29	41.44	30.28	6.69
52459	2020-01-20 05:45:00:000	33.79	376.72	42.19	30.26	6.74
52460	2020-01-20 06:00:00:000	33.96	378.23	42.32	30.23	6.69
52461	2020-01-20 06:15:00:000	33.1	370.17	41.34	30.21	6.62
52462	2020-01-20 06:30:00:000	33.2	369.68	41.51	30.21	6.57
52463	2020-01-20 06:45:00:000	33.96	377.5	42.26	30.2	6.56
52464	2020-01-20 07:00:00:000	33.28	372.7	41.66	30.19	6.56
52465	2020-01-20 07:15:00:000	33.26	372.88	41.75	30.17	6.55
52466	2020-01-20 07:30:00:000	33.75	375.77	41.96	30.16	6.11
52467	2020-01-20 07:45:00:000	33.59	373.5	41.72	30.14	5.37
52468	2020-01-20 08:00:00:000	33.39	373.0	41.74	30.15	6.68
52469	2020-01-20 08:15:00:000	33.52	374.63	41.81	30.18	8.75
52470	2020-01-20 08:30:00:000	32.59	365.82	40.99	30.15	7.79
52471	2020-01-20 08:45:00:000	32.97	370.35	41.55	30.15	6.88
52472	2020-01-20 09:00:00:000	32.92	370.08	41.61	30.15	6.64
52473	2020-01-20 09:15:00:000	32.9	369.83	41.51	30.15	6.52
52474	2020-01-20 09:30:00:000	32.86	366.52	40.99	30.16	6.61
52475	2020-01-20 09:45:00:000	32.81	366.0	40.94	30.19	6.63
52476	2020-01-20 10:00:00:	32.95	368.98	41.29	30.23	6.6

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
52477	2020-01-20 10:15:00:000	33.59	374.13	41.85	30.28	6.65
52478	2020-01-20 10:30:00:000	32.88	371.18	41.46	30.33	6.79
52479	2020-01-20 10:45:00:000	33.56	374.25	41.85	30.39	6.88
52480	2020-01-20 11:00:00:000	33.74	374.62	41.77	30.45	6.88
52481	2020-01-20 11:15:00:000	32.82	369.27	41.3	30.52	6.87
52482	2020-01-20 11:30:00:000	33.72	376.42	42.02	30.57	6.99
52483	2020-01-20 11:45:00:000	33.46	375.07	41.77	30.64	7.27
52484	2020-01-20 12:00:00:000	33.75	374.94	41.91	30.71	7.1
52485	2020-01-20 12:15:00:000	33.06	372.4	41.53	30.78	6.95
52486	2020-01-20 12:30:00:000	33.09	370.37	41.47	30.86	6.79
52487	2020-01-20 12:45:00:000	33.26	370.77	41.64	30.92	6.75
52488	2020-01-20 13:00:00:000	33.14	369.86	41.36	30.96	6.75
52489	2020-01-20 13:15:00:000	33.18	372.07	41.64	31.0	6.67
52490	2020-01-20 13:30:00:000	33.44	373.57	41.85	31.04	6.63
52491	2020-01-20 13:45:00:000	33.02	369.83	41.47	31.07	6.65
52492	2020-01-20 14:00:00:000	33.57	373.22	41.96	31.1	6.69
52493	2020-01-20 14:15:00:000	33.02	370.13	41.49	31.14	6.89
52494	2020-01-20 14:30:00:000	33.02	370.92	41.72	31.16	7.13
52495	2020-01-20 14:45:00:000	33.81	377.02	42.39	31.15	7.35
52496	2020-01-20 15:00:00:	33.14	372.5	41.72	31.15	7.52

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
52497	2020-01-20 15:15:00:000	33.35	371.93	41.91	31.13	7.51
52498	2020-01-20 15:30:00:000	33.44	374.98	42.17	31.11	7.56
52499	2020-01-20 15:45:00:000	33.28	372.4	41.87	31.07	6.96
52500	2020-01-20 16:00:00:000	33.7	375.27	42.13	31.02	6.51
52501	2020-01-20 16:15:00:000	33.02	370.58	41.47	30.99	6.95
52502	2020-01-20 16:30:00:000	33.28	371.83	41.68	30.95	7.08
52503	2020-01-20 16:45:00:000	33.59	374.12	41.76	30.89	6.93
52504	2020-01-20 17:00:00:000	33.75	375.28	41.87	30.84	6.75
52505	2020-01-20 17:15:00:000	33.46	373.32	41.65	30.8	6.65
52506	2020-01-20 17:30:00:000	33.07	370.67	41.36	30.76	6.67
52507	2020-01-20 17:45:00:000	32.97	370.07	41.32	30.73	6.73
52508	2020-01-20 18:00:00:000	32.85	369.2	41.21	30.71	7.38
52509	2020-01-20 18:15:00:000	33.64	373.93	41.72	30.68	7.86
52510	2020-01-20 18:30:00:000	33.53	373.95	41.68	30.66	7.78
52511	2020-01-20 18:45:00:000	33.76	375.85	41.94	30.62	6.88
52512	2020-01-20 19:00:00:000	33.02	371.43	41.55	30.6	6.44
52513	2020-01-20 19:15:00:000	33.33	372.53	41.55	30.56	6.56
52514	2020-01-20 19:30:00:000	33.21	371.48	41.44	30.52	6.88
52515	2020-01-20 19:45:00:000	32.9	370.15	41.36	30.51	7.1
52516	2020-01-20 20:00:00:	32.84	368.88	41.21	30.48	7.15

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
52517	2020-01-20 20:15:00:000	32.97	370.58	41.44	30.47	6.98
52518	2020-01-20 20:30:00:000	33.01	370.0	41.34	30.47	6.82
52519	2020-01-20 20:45:00:000	33.13	372.07	41.59	30.46	6.71
52520	2020-01-20 21:00:00:000	33.56	373.28	41.62	30.46	6.62
52521	2020-01-20 21:15:00:000	33.08	371.82	41.48	30.47	6.57
52522	2020-01-20 21:30:00:000	33.75	372.95	41.62	30.46	6.54
52523	2020-01-20 21:45:00:000	33.67	374.65	41.72	30.45	6.55
52524	2020-01-20 22:00:00:000	33.56	374.85	41.76	30.45	6.45
52525	2020-01-20 22:15:00:000	33.75	376.47	41.89	30.46	6.78
52526	2020-01-20 22:30:00:000	34.39	384.75	42.88	30.47	6.28
52527	2020-01-20 22:45:00:000	34.56	387.25	42.88	30.48	6.95
52528	2020-01-20 23:00:00:000	35.09	391.35	43.48	30.48	6.3
52529	2020-01-20 23:15:00:000	35.65	396.23	43.86	30.51	6.38
52530	2020-01-20 23:30:00:000	36.55	404.55	44.68	30.53	6.79
52531	2020-01-20 23:45:00:000	36.61	407.3	45.02	30.54	6.94
52532	2020-01-21 00:00:00:000	37.97	419.37	46.33	30.55	7.04
52533	2020-01-21 00:15:00:000	37.72	420.87	46.27	30.55	7.12
52534	2020-01-21 00:30:00:000	38.08	421.9	46.5	30.54	7.17
52535	2020-01-21 00:45:00:000	37.19	415.47	45.81	30.53	7.23
52536	2020-01-21 01:00:00:	37.18	412.75	45.64	30.53	7.25

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
55977	2020-02-25 21:30:00:000	64.07	306.07	77.92	31.8	7.1
55978	2020-02-25 21:45:00:000	64.07	306.53	77.92	31.78	7.1
55979	2020-02-25 22:00:00:000	64.07	306.97	78.0	31.76	7.1
55980	2020-02-25 22:15:00:000	64.19	307.32	78.11	31.74	7.12
55981	2020-02-25 22:30:00:000	64.12	307.07	78.07	31.72	7.12
55982	2020-02-25 22:45:00:000	64.07	307.32	78.15	31.71	7.12
55983	2020-02-25 23:00:00:000	64.07	306.67	78.17	31.69	7.12
55984	2020-02-25 23:15:00:000	64.35	307.86	78.43	31.66	7.12
55985	2020-02-25 23:30:00:000	64.76	309.02	78.73	31.64	7.12
55986	2020-02-25 23:45:00:000	64.52	308.02	78.49	31.65	7.13
55987	2020-02-26 00:00:00:000	64.18	306.67	78.06	31.67	7.14
55988	2020-02-26 00:15:00:000	64.17	306.83	78.11	31.67	7.14
55989	2020-02-26 00:30:00:000	64.86	309.2	78.96	31.6	7.13
55990	2020-02-26 00:45:00:000	65.66	312.67	79.78	31.53	7.1
55991	2020-02-26 01:00:00:000	66.2	315.13	80.42	31.49	7.08
55992	2020-02-26 01:15:00:000	66.72	317.78	81.0	31.46	7.06
55993	2020-02-26 01:30:00:000	66.93	318.86	81.2	31.43	7.05
55994	2020-02-26 01:45:00:000	67.47	320.88	81.75	31.41	7.03
55995	2020-02-26 02:00:00:000	66.86	320.03	81.56	31.39	7.03
55996	2020-02-26 02:15:00:	67.34	320.73	81.64	31.36	7.03

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
55997	2020-02-26 02:30:00:000	66.77	318.15	81.08	31.33	7.04
55998	2020-02-26 02:45:00:000	66.79	318.43	81.3	31.3	7.06
55999	2020-02-26 03:00:00:000	66.8	316.25	80.74	31.29	7.07
56000	2020-02-26 03:15:00:000	66.81	316.92	81.0	31.31	7.07
56001	2020-02-26 03:30:00:000	66.56	316.33	80.76	31.31	7.06
56002	2020-02-26 03:45:00:000	66.27	315.66	80.54	31.3	7.04
56003	2020-02-26 04:00:00:000	65.95	313.4	80.16	31.31	7.03
56004	2020-02-26 04:15:00:000	64.95	309.65	78.96	31.41	7.04
56005	2020-02-26 04:30:00:000	63.57	302.83	77.53	31.52	7.08
56006	2020-02-26 04:45:00:000	62.56	297.48	76.24	31.59	7.11
56007	2020-02-26 05:00:00:000	61.78	294.82	75.49	31.62	7.14
56008	2020-02-26 05:15:00:000	61.46	293.2	75.13	31.63	7.16
56009	2020-02-26 05:30:00:000	60.94	290.32	74.7	31.65	7.18
56010	2020-02-26 05:45:00:000	60.94	288.75	74.04	31.66	7.19
56011	2020-02-26 06:00:00:000	60.94	288.95	74.25	31.65	7.2
56012	2020-02-26 06:15:00:000	60.48	288.04	73.99	31.65	7.21
56013	2020-02-26 06:30:00:000	60.46	287.83	74.01	31.64	7.21
56014	2020-02-26 06:45:00:000	60.29	287.33	73.74	31.63	7.21
56015	2020-02-26 07:00:00:000	60.47	287.42	73.89	31.6	7.22
56016	2020-02-26 07:15:00:	60.21	287.07	73.86	31.57	7.22

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
56017	2020-02-26 07:30:00:000	60.16	286.75	73.76	31.55	7.22
56018	2020-02-26 07:45:00:000	60.16	286.73	73.65	31.54	7.22
56019	2020-02-26 08:00:00:000	60.16	286.58	73.73	31.54	7.23
56020	2020-02-26 08:15:00:000	60.16	286.75	73.69	31.53	7.22
56021	2020-02-26 08:30:00:000	60.16	285.83	73.47	31.52	7.22
56022	2020-02-26 08:45:00:000	60.15	285.57	73.5	31.5	7.23
56023	2020-02-26 09:00:00:000	60.14	286.22	73.55	31.49	7.23
56024	2020-02-26 09:15:00:000	60.69	288.58	74.39	31.42	7.22
56025	2020-02-26 09:30:00:000	60.94	290.22	74.62	31.41	7.21
56026	2020-02-26 09:45:00:000	60.99	291.32	74.94	31.45	7.21
56027	2020-02-26 10:00:00:000	61.25	292.15	75.07	31.53	7.2
56028	2020-02-26 10:15:00:000	61.35	292.15	75.17	31.61	7.19
56029	2020-02-26 10:30:00:000	61.61	293.23	75.34	31.68	7.18
56030	2020-02-26 10:45:00:000	61.61	293.47	75.32	31.77	7.18
56031	2020-02-26 11:00:00:000	61.72	293.75	75.49	31.84	7.16
56032	2020-02-26 11:15:00:000	61.72	293.88	75.5	31.92	7.16
56033	2020-02-26 11:30:00:000	62.34	296.25	75.97	31.95	7.15
56034	2020-02-26 11:45:00:000	62.5	297.67	76.27	32.01	7.14
56035	2020-02-26 12:00:00:000	61.93	295.98	75.96	32.13	7.14
56036	2020-02-26 12:15:00:	61.72	294.85	75.62	32.25	7.14

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
56037	2020-02-26 12:30:00:000	60.01	287.52	73.39	32.5	7.18
56038	2020-02-26 12:45:00:000	60.18	286.27	73.24	32.52	7.21
56039	2020-02-26 13:00:00:000	60.77	290.0	74.34	32.49	7.2
56040	2020-02-26 13:15:00:000	61.56	294.14	75.74	32.47	7.18
56041	2020-02-26 13:30:00:000	62.08	296.48	76.29	32.45	7.15
56042	2020-02-26 13:45:00:000	62.34	297.62	76.15	32.44	7.13
56043	2020-02-26 14:00:00:000	62.34	297.67	75.92	32.48	7.11
56044	2020-02-26 14:15:00:000	62.34	297.17	75.58	32.47	7.1
56045	2020-02-26 14:30:00:000	61.92	295.87	75.26	32.45	7.09
56046	2020-02-26 14:45:00:000	61.64	295.28	75.13	32.45	7.08
56047	2020-02-26 15:00:00:000	61.65	294.58	75.09	32.42	7.07
56048	2020-02-26 15:15:00:000	62.22	297.27	75.38	32.35	7.07
56049	2020-02-26 15:30:00:000	62.28	298.67	75.88	32.31	7.06
56050	2020-02-26 15:45:00:000	62.34	297	75.24	32.3	7.05
56051	2020-02-26 16:00:00:000	62.34	297.0	75.38	32.28	7.06
56052	2020-02-26 16:15:00:000	62.34	296.05	75.43	32.25	7.06
56053	2020-02-26 16:30:00:000	62.34	297.67	75.77	32.21	7.06
56054	2020-02-26 16:45:00:000	62.01	295.86	75.35	32.21	7.06
56055	2020-02-26 17:00:00:000	61.93	295.68	75.23	32.21	7.06
56056	2020-02-26 17:15:00:	62.03	295.57	75.36	32.13	7.06

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
56057	2020-02-26 17:30:00:000	62.34	298.78	75.99	32.07	7.05
56058	2020-02-26 17:45:00:000	62.34	297.17	75.51	32.06	7.04
56059	2020-02-26 18:00:00:000	62.24	297.38	75.64	32.07	7.05
56060	2020-02-26 18:15:00:000	61.55	294.85	75.09	32.09	7.05
56061	2020-02-26 18:30:00:000	61.84	295.29	75.19	32.09	7.05
56062	2020-02-26 18:45:00:000	61.56	293.52	74.7	32.11	7.06
56063	2020-02-26 19:00:00:000	61.56	293.73	74.85	32.1	7.07
56064	2020-02-26 19:15:00:000	61.56	294.38	74.91	32.11	7.08
56065	2020-02-26 19:30:00:000	61.61	294.82	75.02	32.1	7.09
56066	2020-02-26 19:45:00:000	62.35	297.62	75.77	32.03	7.08
56067	2020-02-26 20:00:00:000	62.35	298.33	75.86	32.0	7.1
56068	2020-02-26 20:15:00:000	62.48	298.8	76.05	31.98	7.09
56069	2020-02-26 20:30:00:000	63.28	300.97	76.56	31.95	7.08
56070	2020-02-26 20:45:00:000	62.46	299.82	76.34	31.95	7.07
56071	2020-02-26 21:00:00:000	63.1	300.88	76.57	31.94	7.07
56072	2020-02-26 21:15:00:000	62.4	299.53	76.46	31.94	7.06
56073	2020-02-26 21:30:00:000	62.86	300.5	76.56	31.93	7.06
56074	2020-02-26 21:45:00:000	63.28	301.5	76.74	31.91	7.06
56075	2020-02-26 22:00:00:000	63.22	301.0	76.69	31.9	7.06
56076	2020-02-26 22:15:00:	62.86	300.1	76.57	31.88	7.05

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
56077	2020-02-26 22:30:00:000	63.28	301.0	76.71	31.86	7.05
56078	2020-02-26 22:45:00:000	63.01	300.87	76.69	31.86	7.05
56079	2020-02-26 23:00:00:000	63.16	301.3	76.74	31.83	7.05
56080	2020-02-26 23:15:00:000	63.28	301.42	76.78	31.82	7.05
56081	2020-02-26 23:30:00:000	63.55	302.35	77.14	31.82	7.04
56082	2020-02-26 23:45:00:000	63.33	302.6	77.06	31.82	7.02
56083	2020-02-27 00:00:00:000	63.28	301.75	76.86	31.83	6.99
56084	2020-02-27 00:15:00:000	63.39	302.82	77.27	31.82	6.98
56085	2020-02-27 00:30:00:000	63.28	302.22	77.04	31.8	6.97
56086	2020-02-27 00:45:00:000	63.28	301.77	77.02	31.77	6.98
56087	2020-02-27 01:00:00:000	63.28	301.92	77.08	31.73	6.99
56088	2020-02-27 01:15:00:000	62.66	299.95	76.54	31.75	7.01
56089	2020-02-27 01:30:00:000	62.5	298.52	76.26	31.75	7.03
56090	2020-02-27 01:45:00:000	62.5	296.8	75.94	31.74	7.05
56091	2020-02-27 02:00:00:000	62.5	297.8	76.2	31.72	7.07
56092	2020-02-27 02:15:00:000	62.5	298.25	76.18	31.7	7.09
56093	2020-02-27 02:30:00:000	62.5	298.22	76.35	31.69	7.1
56094	2020-02-27 02:45:00:000	63.01	300.17	76.72	31.66	7.09
56095	2020-02-27 03:00:00:000	62.97	300.57	76.69	31.66	7.06
56096	2020-02-27 03:15:00:	63.28	301.72	77.08	31.64	7.04

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
63237	2020-06-04 23:45:00:000	43.59	279.25	64.41	35.81	N/A
63238	2020-06-05 00:00:00:000	46.09	277	68.27	35.8	N/A
63239	2020-06-05 00:15:00:000	46.09	277.0	68.2	35.77	N/A
63240	2020-06-05 00:30:00:000	46.09	275.5	68.16	35.74	N/A
63241	2020-06-05 01:00:00:000	45.31	270.42	67.12	35.68	N/A
63242	2020-06-05 01:15:00:000	45.05	267.75	66.38	35.61	N/A
63243	2020-06-05 01:30:00:000	44.53	266.12	66.23	35.57	N/A
63244	2020-06-05 01:45:00:000	41.02	246.38	61.73	35.51	N/A
63245	2020-06-05 02:00:00:000	43.59	260	64.97	35.45	N/A
63246	2020-06-05 02:15:00:000	43.75	260	63.56	35.4	N/A
63247	2020-06-05 02:30:00:000	42.86	261.0	63.0	35.37	N/A
63248	2020-06-05 02:45:00:000	43.28	258.75	63.7	35.36	N/A
63249	2020-06-05 03:00:00:000	43.75	258.75	63.56	35.35	N/A
63250	2020-06-05 03:15:00:000	42.81	256.0	63.28	35.31	N/A
63251	2020-06-05 03:30:00:000	35.16	212.5	53.44	35.29	N/A
63252	2020-06-05 03:45:00:000	41.09	246.5	61.03	35.27	N/A
63253	2020-06-05 04:00:00:000	42.81	254.5	62.72	35.28	N/A
63254	2020-06-05 04:15:00:000	42.03	252.0	62.06	35.27	N/A
63255	2020-06-05 04:30:00:000	40.89	244.75	60.38	35.27	N/A
63256	2020-06-05 04:45:00:	41.15	244.75	60.75	35.24	N/A

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
63257	2020-06-05 05:00:00:000	41.95	248.5	61.31	35.22	N/A
63258	2020-06-05 05:15:00:000	41.09	246.5	60.84	35.21	N/A
63259	2020-06-05 05:30:00:000	37.71	227.5	56.72	35.2	N/A
63260	2020-06-05 06:00:00:000	41.09	246.5	60.66	35.18	N/A
63261	2020-06-05 06:15:00:000	41.09	245.25	60.47	35.17	N/A
63262	2020-06-05 06:30:00:000	37.71	226.58	56.63	35.16	N/A
63263	2020-06-05 06:45:00:000	41.09	245.67	60.47	35.16	N/A
63264	2020-06-05 07:00:00:000	41.09	244.5	60.47	35.15	N/A
63265	2020-06-05 07:15:00:000	40.7	243.87	60.47	35.14	N/A
63266	2020-06-05 07:30:00:000	39.06	235.0	58.36	35.14	N/A
63267	2020-06-05 07:45:00:000	40.31	242.5	59.91	35.18	N/A
63268	2020-06-05 08:00:00:000	40.57	243.33	59.91	35.21	N/A
63269	2020-06-05 08:15:00:000	40.31	242.5	59.81	35.24	N/A
63270	2020-06-05 08:30:00:000	40.31	238.25	59.06	35.33	N/A
63271	2020-06-05 08:45:00:000	40.31	239.75	59.34	35.33	N/A
63272	2020-06-05 09:00:00:000	40.57	242.92	60.0	35.41	N/A
63273	2020-06-05 09:15:00:000	41.09	245.25	60.47	35.48	N/A
63274	2020-06-05 09:30:00:000	39.92	239.75	60.47	35.5	N/A
63275	2020-06-05 09:45:00:000	41.09	246.5	64.13	35.53	N/A
63276	2020-06-05 10:00:00:	42.03	251.58	64.87	35.61	N/A

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
63277	2020-06-05 10:15:00:000	42.5	253.25	65.25	35.66	N/A
63278	2020-06-05 10:30:00:000	41.51	247.5	63.84	35.7	N/A
63279	2020-06-05 10:45:00:000	42.81	254.75	65.53	35.72	N/A
63280	2020-06-05 11:00:00:000	43.09	257.81	66.09	35.82	N/A
63281	2020-06-05 11:15:00:000	42.03	254.38	64.41	35.9	N/A
63282	2020-06-05 11:30:00:000	43.75	258.75	66.09	35.97	N/A
63283	2020-06-05 11:45:00:000	43.67	262.13	66.94	36.07	N/A
63284	2020-06-05 12:00:00:000	44.22	263.67	67.12	36.14	N/A
63285	2020-06-05 12:15:00:000	41.87	252.62	64.83	36.18	N/A
63286	2020-06-05 12:30:00:000	43.91	261.83	66.56	36.27	N/A
63287	2020-06-05 12:45:00:000	44.53	265.5	67.5	36.33	N/A
63288	2020-06-05 13:00:00:000	44.53	265.87	67.57	36.38	N/A
63289	2020-06-05 13:15:00:000	44.06	264.0	67.08	36.46	N/A
63290	2020-06-05 13:30:00:000	44.53	268.25	67.78	36.52	N/A
63291	2020-06-05 13:45:00:000	45.05	268.17	67.88	36.55	N/A
63292	2020-06-05 14:00:00:000	44.3	265.44	67.36	36.61	N/A
63293	2020-06-05 14:15:00:000	39.58	238.25	61.69	36.66	N/A
63294	2020-06-05 14:30:00:000	42.7	255.94	65.67	36.67	N/A
63295	2020-06-05 14:45:00:000	42.66	255.42	65.62	36.72	N/A
63296	2020-06-05 15:00:00:	42.14	253.25	65.34	36.74	N/A

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
63297	2020-06-05 15:15:00:000	37.66	227.25	59.62	36.71	N/A
63298	2020-06-05 15:30:00:000	41.88	253.25	65.11	36.7	N/A
63299	2020-06-05 15:45:00:000	42.66	254.19	65.81	36.68	N/A
63300	2020-06-05 16:15:00:000	38.36	228.0	60.05	36.58	N/A
63301	2020-06-05 16:30:00:000	42.66	257.25	66.38	36.53	N/A
63302	2020-06-05 16:45:00:000	43.44	259.25	66.94	36.48	N/A
63303	2020-06-05 17:00:00:000	43.44	260.0	67.22	36.44	N/A
63304	2020-06-05 17:15:00:000	42.66	255.75	66.38	36.39	N/A
63305	2020-06-05 17:30:00:000	43.44	262.0	67.78	36.35	N/A
63306	2020-06-05 17:45:00:000	43.44	262.75	67.78	36.31	N/A
63307	2020-06-05 18:00:00:000	41.46	249.08	64.97	36.28	N/A
63308	2020-06-05 18:15:00:000	43.44	258.75	67.22	36.24	N/A
63309	2020-06-05 18:30:00:000	44.37	264.13	67.78	36.21	N/A
63310	2020-06-05 18:45:00:000	44.37	265.5	68.34	36.14	N/A
63311	2020-06-05 19:00:00:000	43.28	261.69	67.01	36.08	N/A
63312	2020-06-05 19:15:00:000	44.41	264.44	67.99	36.02	N/A
63313	2020-06-05 19:30:00:000	44.37	266.75	68.91	35.96	N/A
63314	2020-06-05 19:45:00:000	45.31	269.19	69.05	35.92	N/A
63315	2020-06-05 20:00:00:000	42.66	256.62	66.09	35.83	N/A
63316	2020-06-05 20:15:00:	45.7	271.5	69.61	35.8	N/A

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
63317	2020-06-05 20:30:00:000	46.09	273.5	70.31	35.77	N/A
63318	2020-06-05 20:45:00:000	46.09	276.25	70.31	35.74	N/A
63319	2020-06-05 21:00:00:000	45.52	272.17	69.47	35.75	N/A
63320	2020-06-05 21:15:00:000	46.88	280.5	71.44	35.73	N/A
63321	2020-06-05 21:30:00:000	47.25	282.85	71.72	35.72	N/A
63322	2020-06-05 22:00:00:000	47.34	282.81	71.37	35.65	N/A
63323	2020-06-05 22:15:00:000	47.81	284.42	72.0	35.62	N/A
63324	2020-06-05 22:30:00:000	47.81	284.5	71.93	35.6	N/A
63325	2020-06-05 22:45:00:000	47.58	283.44	71.79	35.59	N/A
63326	2020-06-05 23:00:00:000	47.55	282.58	71.63	35.59	N/A
63327	2020-06-05 23:15:00:000	47.5	282.55	71.66	35.59	N/A
63328	2020-06-05 23:30:00:000	47.5	283.12	71.58	35.61	N/A
63329	2020-06-05 23:45:00:000	47.97	283	71.72	35.63	N/A
63330	2020-06-06 00:00:00:000	47.81	283.0	71.72	35.64	N/A
63331	2020-06-06 00:15:00:000	47.89	283.75	71.86	35.62	N/A
63332	2020-06-06 00:30:00:000	47.81	285.88	72.28	35.63	N/A
63333	2020-06-06 00:45:00:000	47.81	286.63	72.42	35.62	N/A
63334	2020-06-06 01:00:00:000	48.75	289.5	72.75	35.62	N/A
63335	2020-06-06 01:15:00:000	48.75	289.56	72.98	35.62	N/A
63336	2020-06-06 01:30:00:	48.75	288.5	73.13	35.62	N/A

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
66297	2020-07-07 23:00:00:000	34.08	386.69	29.81	29.97	6.6
66298	2020-07-07 23:15:00:000	34.69	390.35	29.95	29.97	6.6
66299	2020-07-07 23:30:00:000	34.97	390.92	30.05	29.97	6.6
66300	2020-07-07 23:45:00:000	34.98	393.68	30.09	29.97	6.6
66301	2020-07-08 00:00:00:000	35.02	394.61	30.28	29.97	6.6
66302	2020-07-08 00:15:00:000	35.13	394.86	30.37	29.97	6.6
66303	2020-07-08 00:30:00:000	35.63	398.21	30.7	29.97	6.6
66304	2020-07-08 00:45:00:000	36.27	404.68	31.14	29.97	6.6
66305	2020-07-08 01:00:00:000	36.72	408.4	31.39	29.98	6.6
66306	2020-07-08 01:15:00:000	36.72	412.75	31.78	29.98	6.6
66307	2020-07-08 01:30:00:000	37.52	417.53	32.06	29.97	6.6
66308	2020-07-08 01:45:00:000	37.53	421.35	32.34	29.98	6.6
66309	2020-07-08 02:00:00:000	37.66	422.43	32.42	29.98	6.6
66310	2020-07-08 02:15:00:000	38.44	427.0	32.72	29.98	6.6
66311	2020-07-08 02:30:00:000	38.44	429.54	32.91	29.98	6.6
66312	2020-07-08 02:45:00:000	38.44	429.75	33.05	29.98	6.6
66313	2020-07-08 03:00:00:000	38.44	430.92	32.91	29.98	6.6
66314	2020-07-08 03:15:00:000	39.43	441.92	33.87	29.98	6.6
66315	2020-07-08 03:30:00:000	40.65	451.32	34.59	29.98	6.6
66316	2020-07-08 03:45:00:	41.88	466.71	35.81	29.98	6.6

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
66317	2020-07-08 04:00:00:000	42.68	473.5	36.14	29.99	6.6
66318	2020-07-08 04:15:00:000	43.54	480.81	36.77	29.99	6.6
66319	2020-07-08 04:30:00:000	43.59	481.68	36.8	29.99	6.6
66320	2020-07-08 04:45:00:000	43.95	489.21	37.45	29.99	6.6
66321	2020-07-08 05:00:00:000	43.98	491.81	37.55	29.99	6.6
66322	2020-07-08 05:15:00:000	44.48	493.5	37.59	29.99	6.6
66323	2020-07-08 05:30:00:000	44.44	495.83	37.88	29.99	6.6
66324	2020-07-08 05:45:00:000	45.2	499.5	38.09	29.99	6.6
66325	2020-07-08 06:00:00:000	45.31	502.46	38.44	29.99	6.6
66326	2020-07-08 06:15:00:000	45.31	504.59	38.53	29.99	6.6
66327	2020-07-08 06:30:00:000	45.83	420.46	38.72	29.99	6.6
66328	2020-07-08 06:45:00:000	45.92	404.17	38.78	29.99	6.6
66329	2020-07-08 07:00:00:000	45.9	403.13	38.81	29.99	6.6
66330	2020-07-08 07:15:00:000	45.61	403.47	38.81	29.99	6.6
66331	2020-07-08 07:30:00:000	46.09	404.84	38.85	29.99	6.6
66332	2020-07-08 07:45:00:000	46.09	404.5	38.81	29.99	6.6
66333	2020-07-08 08:00:00:000	46.12	405.5	38.93	29.99	6.6
66334	2020-07-08 08:15:00:000	46.09	407.64	39.09	29.99	6.6
66335	2020-07-08 08:30:00:000	46.22	408.36	39.22	29.99	6.6
66336	2020-07-08 08:45:00:	46.12	409.61	39.33	29.99	6.6

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
66337	2020-07-08 09:00:00:000	46.44	409.65	39.26	29.99	6.6
66338	2020-07-08 09:15:00:000	46.15	409.47	39.31	29.99	6.6
66339	2020-07-08 09:30:00:000	46.28	409.62	39.37	29.99	6.6
66340	2020-07-08 09:45:00:000	46.52	410.25	39.37	29.99	6.6
66341	2020-07-08 10:00:00:000	47.03	414.58	39.66	29.99	6.6
66342	2020-07-08 10:15:00:000	47.3	416.3	39.91	29.99	6.6
66343	2020-07-08 10:30:00:000	47.03	415.5	40.03	29.99	6.6
66344	2020-07-08 10:45:00:000	47.7	418.22	40.15	29.99	6.6
66345	2020-07-08 11:00:00:000	46.99	415.75	39.8	29.99	6.6
66346	2020-07-08 11:15:00:000	47.05	414.54	39.7	29.99	6.6
66347	2020-07-08 11:30:00:000	46.93	414.06	39.66	29.99	6.6
66348	2020-07-08 11:45:00:000	46.91	414.4	39.77	29.99	6.6
66349	2020-07-08 12:00:00:000	46.93	415.5	39.7	29.99	6.6
66350	2020-07-08 12:15:00:000	47.68	418.46	40.18	29.99	6.6
66351	2020-07-08 12:30:00:000	47.81	421.1	40.2	29.98	6.6
66352	2020-07-08 12:45:00:000	47.81	419.19	40.09	29.98	6.6
66353	2020-07-08 13:00:00:000	47.09	416.31	39.55	29.98	6.6
66354	2020-07-08 13:15:00:000	46.88	415.22	39.47	29.98	6.6
66355	2020-07-08 13:30:00:000	46.88	412.46	39.23	29.98	6.6
66356	2020-07-08 13:45:00:	46.65	412.0	39.21	29.97	6.6

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
66357	2020-07-08 14:00:00:000	46.61	412.64	39.28	29.97	6.6
66358	2020-07-08 14:15:00:000	46.7	411.75	39.22	29.97	6.6
66359	2020-07-08 14:30:00:000	46.09	410.34	39.09	29.97	6.6
66360	2020-07-08 14:45:00:000	46.09	406.63	38.72	29.98	6.6
66361	2020-07-08 15:00:00:000	45.8	403.78	38.43	29.98	6.6
66362	2020-07-08 15:15:00:000	45.31	401.17	38.14	29.98	6.6
66363	2020-07-08 15:30:00:000	45.31	398.89	38.09	29.98	6.6
66364	2020-07-08 15:45:00:000	45.02	398.41	37.9	29.98	6.6
66365	2020-07-08 16:00:00:000	44.51	395.19	37.69	29.99	6.6
66366	2020-07-08 16:15:00:000	44.53	392.28	37.62	29.99	6.6
66367	2020-07-08 16:30:00:000	44.91	395.33	38.03	29.99	6.6
66368	2020-07-08 16:45:00:000	44.73	396.34	38.0	29.99	6.6
66369	2020-07-08 17:00:00:000	45.31	398.0	38.25	29.99	6.6
66370	2020-07-08 17:15:00:000	45.31	399.09	38.29	29.99	6.6
66371	2020-07-08 17:30:00:000	45.31	398.54	38.3	29.99	6.6
66372	2020-07-08 17:45:00:000	45.31	398.66	38.3	29.99	6.6
66373	2020-07-08 18:00:00:000	45.31	399.36	38.33	29.99	6.6
66374	2020-07-08 18:15:00:000	45.31	400.25	38.46	29.99	6.6
66375	2020-07-08 18:30:00:000	45.31	398.09	38.29	29.99	6.6
66376	2020-07-08 18:45:00:	45.31	399.0	38.33	29.99	6.6

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
66377	2020-07-08 19:00:00:000	45.31	398.2	38.31	29.99	6.6
66378	2020-07-08 19:15:00:000	45.31	399.81	38.39	29.99	6.6
66379	2020-07-08 19:30:00:000	45.31	399.66	38.39	29.99	6.6
66380	2020-07-08 19:45:00:000	45.31	399.75	38.41	29.99	6.6
66381	2020-07-08 20:00:00:000	45.33	399.61	38.45	29.99	6.6
66382	2020-07-08 20:15:00:000	45.31	400.17	38.53	29.99	6.6
66383	2020-07-08 20:30:00:000	45.31	400.39	38.43	29.99	6.6
66384	2020-07-08 20:45:00:000	45.31	401.18	38.53	29.99	6.6
66385	2020-07-08 21:00:00:000	45.31	400.5	38.48	29.99	6.6
66386	2020-07-08 21:15:00:000	45.31	399.75	38.43	29.99	6.6
66387	2020-07-08 21:30:00:000	45.31	400.4	38.42	29.99	6.6
66388	2020-07-08 21:45:00:000	45.31	400.16	38.46	29.99	6.6
66389	2020-07-08 22:00:00:000	45.31	399.0	38.38	29.99	6.6
66390	2020-07-08 22:15:00:000	45.31	400.03	38.46	29.99	6.6
66391	2020-07-08 22:30:00:000	45.31	400.43	38.53	29.99	6.6
66392	2020-07-08 22:45:00:000	45.31	400.25	38.64	29.99	6.6
66393	2020-07-08 23:00:00:000	45.21	398.28	38.29	29.99	6.6
66394	2020-07-08 23:15:00:000	45.31	399.0	38.39	29.99	6.6
66395	2020-07-08 23:30:00:000	45.31	399.08	38.41	29.99	6.6
66396	2020-07-08 23:45:00:	45.31	397.44	38.25	29.99	6.6

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
69277	2020-08-08 00:00:00:000	24.2	328.42	33.75	34.5	N/A
69278	2020-08-08 00:15:00:000	24.84	333.82	34.03	34.5	N/A
69279	2020-08-08 00:30:00:000	24.77	331.59	33.98	34.47	N/A
69280	2020-08-08 00:45:00:000	23.89	322.02	33.28	34.41	N/A
69281	2020-08-08 01:00:00:000	23.2	315.72	32.93	34.38	N/A
69282	2020-08-08 01:15:00:000	23.31	315.18	32.98	34.39	N/A
69283	2020-08-08 01:30:00:000	24.05	321.0	33.25	34.39	N/A
69284	2020-08-08 01:45:00:000	24.05	323.52	33.42	34.39	N/A
69285	2020-08-08 02:00:00:000	24.06	324.0	33.47	34.38	N/A
69286	2020-08-08 02:15:00:000	23.5	319.23	33.24	34.33	N/A
69287	2020-08-08 02:30:00:000	24.05	325.86	33.67	34.34	N/A
69288	2020-08-08 02:45:00:000	24.84	330.72	34.0	34.34	N/A
69289	2020-08-08 03:00:00:000	24.26	328.69	33.86	34.33	N/A
69290	2020-08-08 03:15:00:000	24.84	330.57	34.03	34.32	N/A
69291	2020-08-08 03:30:00:000	24.84	335.62	34.48	34.33	N/A
69292	2020-08-08 03:45:00:000	24.84	337.52	34.66	34.33	N/A
69293	2020-08-08 04:00:00:000	24.84	337.36	34.63	34.33	N/A
69294	2020-08-08 04:15:00:000	24.84	334.14	34.49	34.32	N/A
69295	2020-08-08 04:30:00:000	24.22	327.13	33.81	34.26	N/A
69296	2020-08-08 04:45:00:	24.06	326.1	33.75	34.24	N/A

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
69297	2020-08-08 05:00:00	24.65	330.72	33.96	34.24	N/A
69298	2020-08-08 05:15:00	24.84	336.04	34.41	34.26	N/A
69299	2020-08-08 05:30:00	24.84	335.21	34.45	34.27	N/A
69300	2020-08-08 05:45:00	25.1	338.89	34.67	34.27	N/A
69301	2020-08-08 06:00:00	25.1	339.5	34.77	34.26	N/A
69302	2020-08-08 06:15:00	25.78	348.52	35.31	34.28	N/A
69303	2020-08-08 06:30:00	26.56	354.95	35.59	34.3	N/A
69304	2020-08-08 06:45:00	26.72	356.02	35.74	34.28	N/A
69305	2020-08-08 07:00:00	26.64	356.43	35.55	34.28	N/A
69306	2020-08-08 07:15:00	26.64	353.67	35.44	34.29	N/A
69307	2020-08-08 07:30:00	26.28	352.39	35.31	34.28	N/A
69308	2020-08-08 07:45:00	25.78	347.34	35.05	34.29	N/A
69309	2020-08-08 08:00:00	25.8	347.16	34.98	34.3	N/A
69310	2020-08-08 08:15:00	25.78	349.33	35.09	34.3	N/A
69311	2020-08-08 08:30:00	25.8	343.83	34.72	34.28	N/A
69312	2020-08-08 08:45:00	25.01	334.98	34.11	34.25	N/A
69313	2020-08-08 09:00:00	25.61	341.36	34.64	34.34	N/A
69314	2020-08-08 09:15:00	26.41	352.61	35.32	34.39	N/A
69315	2020-08-08 09:30:00	26.58	356.39	35.41	34.41	N/A
69316	2020-08-08 09:45:00	26.58	356.88	35.33	34.43	N/A

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
69317	2020-08-08 10:00:00:000	26.66	358.59	35.23	34.44	N/A
69318	2020-08-08 10:15:00:000	26.58	355.55	35.04	34.43	N/A
69319	2020-08-08 10:30:00:000	25.9	351.19	34.66	34.44	N/A
69320	2020-08-08 10:45:00:000	24.65	359.31	33.61	34.47	N/A
69321	2020-08-08 11:00:00:000	22.9	351.18	32.1	34.45	N/A
69322	2020-08-08 11:15:00:000	21.42	347.85	30.68	34.45	N/A
69323	2020-08-08 11:30:00:000	19.06	350.9	28.91	34.47	N/A
69324	2020-08-08 11:45:00:000	18.05	347.68	27.84	34.5	N/A
69325	2020-08-08 12:00:00:000	17.17	363.25	27.2	34.53	N/A
69326	2020-08-08 12:15:00:000	16.25	357.5	26.72	34.56	N/A
69327	2020-08-08 12:30:00:000	16.25	373.73	26.72	34.58	N/A
69328	2020-08-08 12:45:00:000	16.18	356.09	26.49	34.52	N/A
69329	2020-08-08 13:00:00:000	16.25	367.27	26.7	34.51	N/A
69330	2020-08-08 13:15:00:000	17.03	381.72	27.22	34.5	N/A
69331	2020-08-08 13:30:00:000	17.03	369.17	27.28	34.47	N/A
69332	2020-08-08 13:45:00:000	17.17	369.91	27.22	34.46	N/A
69333	2020-08-08 14:00:00:000	3.82	139.02	16.01	34.5	N/A
69334	2020-08-08 14:15:00:000	11.72	181.25	20.5	34.53	N/A
69335	2020-08-08 14:30:00:000	16.89	352.82	27.0	34.5	N/A
69336	2020-08-08 14:45:00:	16.24	348.69	26.41	34.43	N/A

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
69337	2020-08-08 15:00:00:000	15.33	335.64	25.75	34.37	N/A
69338	2020-08-08 15:15:00:000	15.33	329.55	25.52	34.3	N/A
69339	2020-08-08 15:30:00:000	14.42	323.39	25.27	34.22	N/A
69340	2020-08-08 15:45:00:000	14.41	318.61	25.06	34.16	N/A
69341	2020-08-08 16:00:00:000	15.23	326.97	25.41	34.16	N/A
69342	2020-08-08 16:15:00:000	15.69	338.15	25.99	34.23	N/A
69343	2020-08-08 16:30:00:000	18.0	257.59	27.74	34.33	N/A
69344	2020-08-08 16:45:00:000	19.28	267.98	29.06	34.39	N/A
69345	2020-08-08 17:00:00:000	21.05	287.81	30.2	34.41	N/A
69346	2020-08-08 17:15:00:000	21.9	302.8	31.22	34.44	N/A
69347	2020-08-08 17:30:00:000	23.46	318.59	32.13	34.45	N/A
69348	2020-08-08 17:45:00:000	23.88	325.05	32.55	34.43	N/A
69349	2020-08-08 18:00:00:000	24.12	330.8	32.91	34.4	N/A
69350	2020-08-08 18:15:00:000	24.45	332.48	32.88	34.27	N/A
69351	2020-08-08 18:30:00:000	23.91	326.09	32.52	34.18	N/A
69352	2020-08-08 18:45:00:000	23.91	326.34	32.57	34.13	N/A
69353	2020-08-08 19:00:00:000	23.91	323.5	32.32	34.09	N/A
69354	2020-08-08 19:15:00:000	24.14	328.63	32.71	34.14	N/A
69355	2020-08-08 19:30:00:000	24.25	332.17	32.91	34.17	N/A
69356	2020-08-08 19:45:00:	24.69	336.93	33.23	34.23	N/A

S.No.	Time	ETP_1 BOD (mg/L)(avg)	ETP_1 COD (mg/L)(avg)	ETP_1 TSS (mg/L)(avg)	ETP_1 Temperature (°C)(avg)	ETP_1 pH (pH)(avg)
	000					
69357	2020-08-08 20:00:00:000	24.69	341.32	33.47	34.27	N/A
69358	2020-08-08 20:15:00:000	25.53	345.14	33.78	34.28	N/A
69359	2020-08-08 20:30:00:000	25.57	346.69	33.87	34.29	N/A
69360	2020-08-08 20:45:00:000	26.23	354.83	34.38	34.29	N/A
69361	2020-08-08 21:00:00:000	26.41	358.23	34.57	34.29	N/A
69362	2020-08-08 21:15:00:000	26.89	363.95	34.85	34.29	N/A
69363	2020-08-08 21:30:00:000	26.41	359.64	34.59	34.24	N/A
69364	2020-08-08 21:45:00:000	26.41	356.14	34.47	34.21	N/A
69365	2020-08-08 22:00:00:000	26.41	356.05	34.57	34.21	N/A
69366	2020-08-08 22:15:00:000	26.41	357.05	34.57	34.2	N/A
69367	2020-08-08 22:30:00:000	26.23	356.89	34.47	34.14	N/A
69368	2020-08-08 22:45:00:000	25.63	351.63	34.05	34.1	N/A
69369	2020-08-08 23:00:00:000	25.7	353.09	34.16	34.09	N/A
69370	2020-08-08 23:15:00:000	26.41	357.61	34.59	34.08	N/A
69371	2020-08-08 23:30:00:000	26.41	357.53	34.62	34.09	N/A
69372	2020-08-08 23:45:00:000	26.43	356.57	34.59	34.11	N/A
69373	2020-08-09 00:00:00:000	26.42	358.03	34.63	34.12	N/A
69374	2020-08-09 00:15:00:000	26.44	358.85	34.73	34.12	N/A
69375	2020-08-09 00:30:00:000	26.44	356.85	34.62	34.13	N/A
69376	2020-08-09 00:45:00:	26.45	361.31	34.84	34.12	N/A



Anushree Kapadia <anushree@hexislegal.in>

Service of reply/ objections to report of committee

Anushree Kapadia <anushree@hexislegal.in>

Fri, Oct 9, 2020 at 3:44 PM

To: uh-gpcb-ahme@gujarat.gov.in, rajeshgpcb@gmail.com, legal.gpcb@gmail.com, Aniruddha Kulkarni <aniruddha1488@gmail.com>, sshooda65@gmail.com, JITENDAR SINGH <jpvlawassociates@gmail.com>, megha jani <adv.megha.jani@gmail.com>

**National Green Tribunal
O.A. No. 7/2020 (WZ)****ADVANCE SERVICE OF REPLY/ OBJECTIONS TO REPORT OF COMMITTEE**

Dear Sir/ Ma'am

Please find attached the complete scan of the reply / objections on behalf of Respondent No. 1 in O.A. No. 7/2020 (WZ) filed before Hon'ble National Green Tribunal.

Yours sincerely

Anushree Kapadia

Advocate for Respondent no. 1

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Anushree Kapadia
Advocate
Supreme Court of India



HEXIS LEGAL



B-5/50, 3rd Floor,
Safdarjung Enclave,
New Delhi 110029

#M - +91 9958009320

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